SOYAL®

Slim Series
AR-331-H
Access Controller

Slim yet elegant 125kHz or 13.56MHz
Mullion access controller with Chrome color

51

Slim Design
Suitable for narrow installation where only Mullion design controller can fit in

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.

Waterproof
Built-in IP56, we also provide rubber pad for more protection on for the mainboard

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 occuring, it will remain at its place.

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

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		32	
DI/DO	DI	Egress / Door State / Door Bell (Use Keypad'#')	
	RO	Door Lock Relay / Alarm Relay*	
	DO	Door Bell Output (Common Alarm PIN) / Security Trigger Output*/Arming Output / Duress Output	
		*Required External Relay Output Module	
Doors/Floors Number		1.5 Doors / 32 Floors	
User Capacity		3000	
Event Log		1500	
Indicator	LED	2 Bi-Color LED	
	Buzzer	1	
Extend Port		Tamper Switch / Tamper Output / Wiegand IN	
Dimension (mm)		114(H)X78(W)X33(D)	
Housing Material	Housing	Zinc Alloy / ABS	
	Keypad	Illuminated Keypad / Invisible Keypad function*	
Color		Chrome	
Weight (g)		Zinc Alloy: 240±10 / ABS: 150±10	
Power Consumption		<3W	
Power Voltage		9-24VDC	
Ingress Protection		IP56	
Enviroment	Operating Temperature	-20℃ ~ +65℃	
	Storage Temperature	-25℃ to +70℃	
	Operating Humidity	20%~90%	
	Storage Humidity	5%~95%	

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.
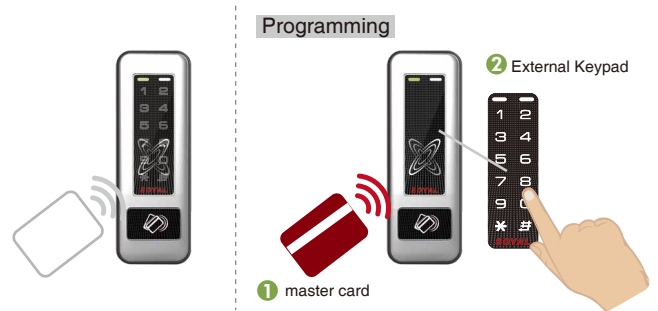

2. Keypad-less

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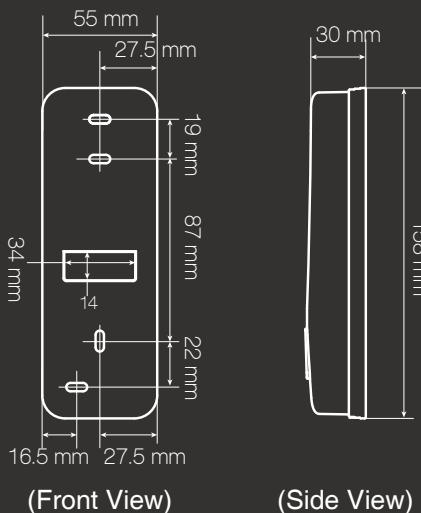

3. Illuminated Touch Keypad Invisible

The keypad function is available but there is no numerical keypad on it (invisible keypad). To make configuration easier, attach External Numerical Keypad and swipe Authorization or Master Card first for authentication and detach when finished.

Programming
❷ External Keypad
❶ master card

INSTALLATION(mm)

55 mm
27.5 mm
19 mm
87 mm
22 mm
34 mm
14
16.5 mm 27.5 mm

(Front View)

30 mm
158 mm

(Side View)

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 (+)
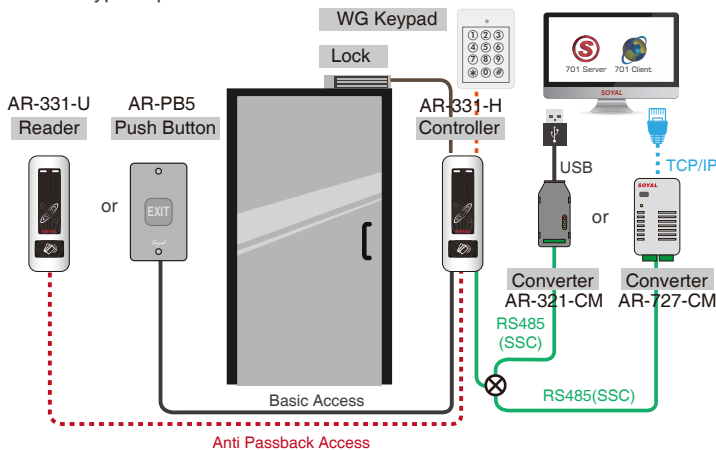
Type
1=Standard

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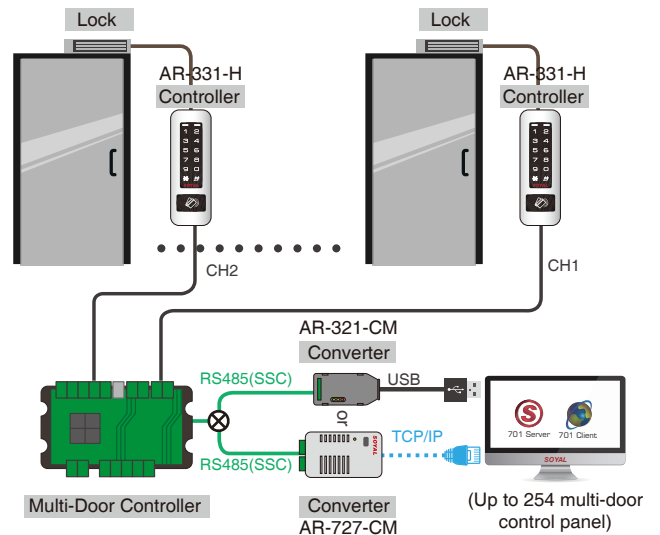
Netwoking: beside configuration through Wiegand Keyboard and Master Card, you can also link AR-331-H with Soyal converter to PC for configuration via SOYAL Software or for anti-cloning and encryption process.

--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 **X100**

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

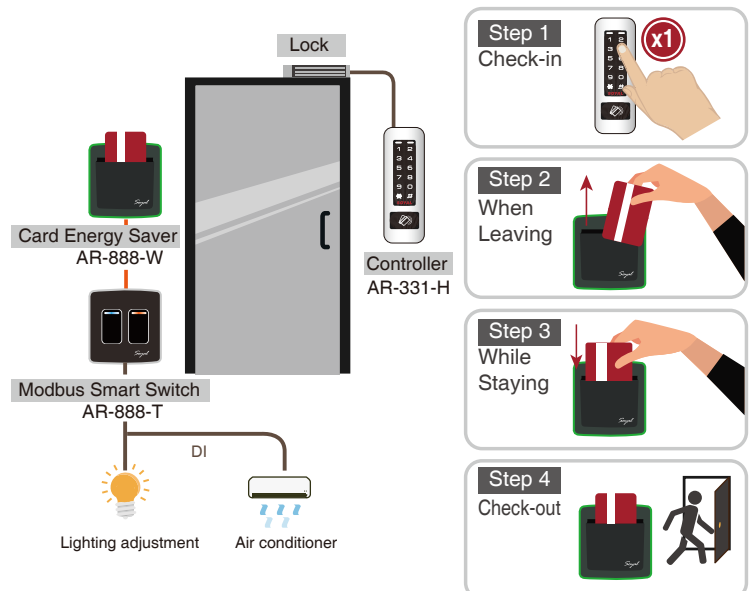EEPROM | ROM | RAM
CPU | COS

X100

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

Card Energy Saver
AR-888-W

Modbus Smart Switch
AR-888-T

Lighting adjustment   Air conditioner

Controller
AR-331-H

Step 1 Check-in **x1**

Step 2 When Leaving

Step 3 While Staying

Step 4 Check-out

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

NETWORKING

● Software

701 Server 701 Client

ISP Tools

NODE 737

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

STANDALONE

● Input/Output

AR-331-H

Locks
Magnetic Lock
AR-0600M-270
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

● Slim Series

16.000 User IP Based Access Controller / Wiegand Reader
AR-331-E / AR-331-K/U
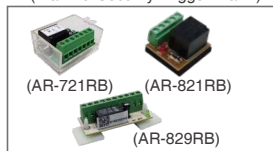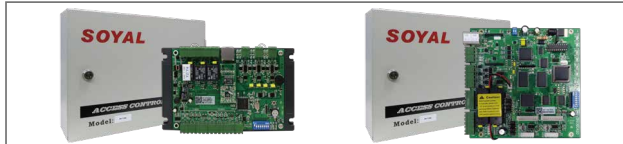**Fingerprint Access Controller**
AR-331-EF

● External Relay Output
(Alarm & Security Trigger Alarm)

(AR-721RB)   (AR-821RB)

(AR-829RB)

1 Form C relay with time delay
AR-721RB
1 Form C relay
AR-821RB
2 Form C relay
AR-829RB

Stainless Steel Push Button
AR-PB5 Series

● 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

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 betweeen SOYAL H Series and E Series Controller?**

A: SOYAL access controller classified into two categories in term of specification; H Series and E Series.
SOYAL H Series controller has already include all basic standalone and networking access controller that you need. But E series controller provide what H 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