SOYAL®

AR-721-H
Multi Functional Access Controller

Classic and popular multi-functional controller of SOYAL with high scalability, durability and CP value

Hot Sale Controller of SOYAL
Best-selling controller over the past 10 years, high CP value, multiple functions. Can meet most users' demands.

Selectable Frequency
125KHz: Support EM card
13.56MHz : Support Mifare, NFC (emulate UID), DESFire (Crypto comply with EAL4+)

Expandable User Capacity to More than 10,000 Users
Built-in multiple control modes:
1. One door, one and half door
2. Multiple doors (with multi-door controller), can be more than 10,000 user capacity

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

Features

| Lift Control | Alarming for Abnormal Event | In-Field Firmware Upgrade | Arming and Disarming | Watchdog | Anti-Passback | Web | Youtube |

- Built-in hardware watchdog, real time clock, arming, force alarm, door close delay alarm, doorbell and duress code & output
- Built-in door auto open time zone, holiday edit, door group & time setting. With multi-door control panel, support more time and group sets
- Standalone / Networking / Support Cascade Structure
- Support RS485 communication encryption, SSC (Soyal Security Communication)
- In-field firmware upgrade

- Multiple access mode: card only, card or password, card and password
- Multi output: door lock output (0.1-600 sec. and toggle mode) & alarm output (1-600 sec.)
- Silent operation mode: push button mute and all mute 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	1. ISO 14443 Mifare Ultralight, Classic, DESFire EV1 2. NFC (card simulation)
Crypto		——	CC Certification: 3DES Crypto comply with EAL4+
RFID Reading Range		10-18CM	2-8CM
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) / Arming Output / Security Trigger Output* / Duress Output	
	*Required External Relay Output Module		
Doors/Floors Number		1.5 Doors / 32 Floors	
User Capacity		1024	
Event Log		1200	
Indicator	LED	Bi-Color LED Ring Indicator GREEN= arming, disarming/standby mode & access granted RED= abnormal event: access denied & alarming	
	Buzzer	1	
Extend Port		Tamper Switch/Tamper Output/Wiegand IN	
Dimension (mm)		111(H)X77(W)X26(D)	
Material	Housing	ABS	
	Keypad	Rubber	
Color		Silver & Gray	
Weight (g)		100±10	
Power Consumption		<3W	
Power Voltage		9-24VDC	
Ingress Protection		None	
Enviroment	Operating Temperature	-20℃ ~ +65℃	
	Storage Temperature	-25℃ ~ +70℃	
	Operating Humidity	20%~90%	
	Storage Humidity	5%~95%	

WHAT WE OFFER

Industrial Grade / High Durability

Made of industrial grade materials in compliance with RoHS, which is far higher than general commercial grade, Soyal products work well in extreme environment with long working life.

Anti-Cloning and Anti-Duplicate

We provide anti-cloning and encryption for whole system to tighten up the security. It supports DESFire in compliance with EAL4+, more secure than other brand's controller.

Support Soyal Cascade Structure

When scaling your system it is not only having more hardware, higher security level, and more spaces to control; it also means there will be more people with access. Without replacing or changing installed hardware, adjust your controller user capacities by adding external Multi-Door Controller; from a thousand to more than ten thousand user capacity.

High Scalability, Beyond Access Controller

Each product manufactured by Soyal is made for total solution and to offer flexibility. For instance, Soyal main product is access controller but you can find Soyal on other application like offline consumption device, charging device, and many more just by changing its firmware.

No Exclusivity, Open Integration Resources

SOYAL provides open sources such as SDK and protocol document that have "no-exclusively and open source integration" characteristic. SOYAL also supports integrations, like JSON, Graphic QL, Julia, Modbus, so customers can easily develop their own software.

INSTALLATION(mm)

77
22.5
111
42
30
30
41.5

(Front View)
(Side View)
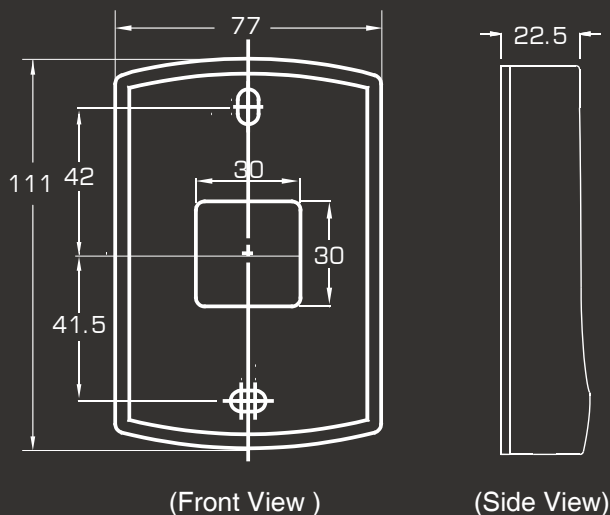
HOW TO ORDER

AR-721-HXR1NX1

Frequency
B=125kHz / D=13.56MHz

RTC
R=Built-in RTC

Communication
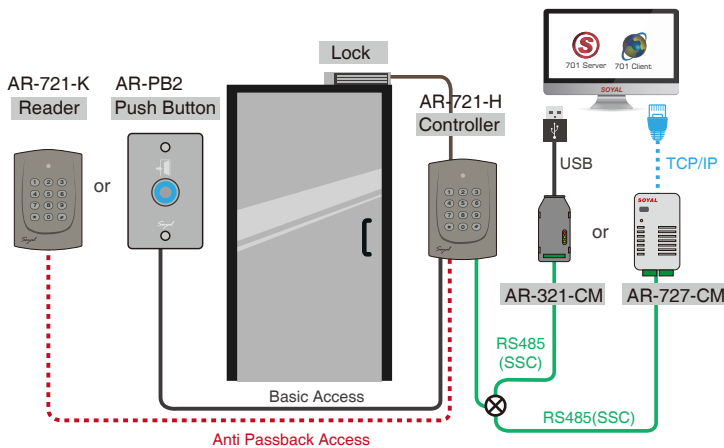1=RS485

Waterproof
N=Non Waterproof

Type
1=Standard

Color
1=Silver
2=Gray
B=Black

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-721-H with Soyal converter to PC for configuration via SOYAL Software or for anti-cloning and encryption process.

--1024 User, 11 Timezone--

● CASCADE STRUCTURE

Upgrade user capacity without replacing AR-721-H installed with additional hardware of SOYAL Multi-Door Control Series.

Under Multi-Door Control Panel, when RS485 communication is working normally, AR-721-H will be a Slave Reader of Control Panel. Once its communication is cut off, AR-721-H will automatically be Access Control and have control on its user and parameter setting.
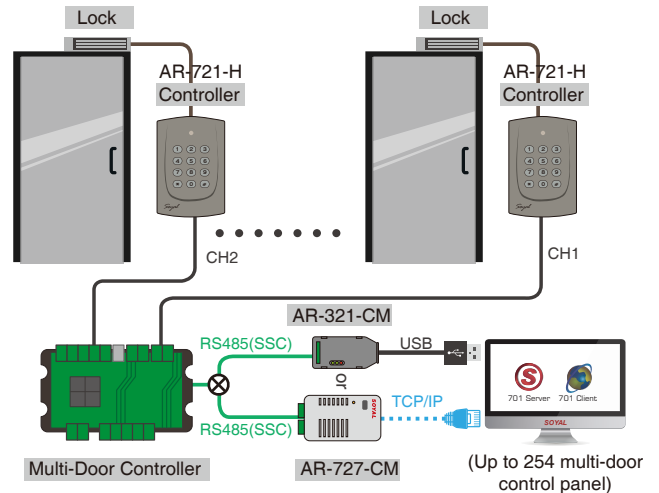

--16000 User, 63 Timezone--

● INTERLOCK CONTROL SYSTEM

Suitable for rooms that required high hygiene for example clean room technology or laboratories that certain doors may only be opened if others are closed. Besides providing restriction for more than one door open at the same time, SOYAL AR-721-H provides user access to open door which only authorized user with valid tags can open the door.

DOOR SENSOR V:Open X:Can't open	Door Open			
	Ao	Bo	Co	Do
	O	X	X	X
	X	O	X	X
	X	X	O	X
	X	X	X	O
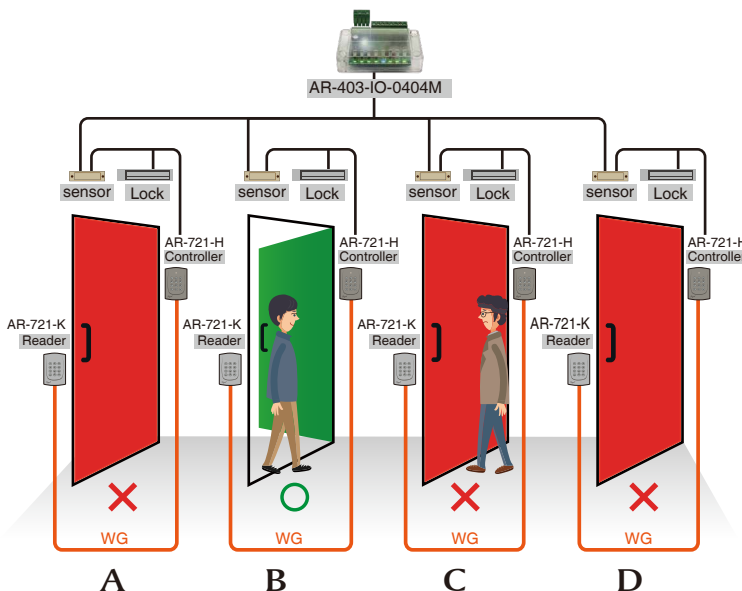
● SCADA: Remote Control and Monitoring System

SOYAL provide both access controller and I/O module exist on the same system of SCADA for remote control and monitoring system.

- Remotely control 721-H I/O status(ON or OFF), doors status (open or close), and arming/disarming status
- Set up abnormal events indicator for pop-up message
- Monitoring controllers and door status on site through graphical control
- Support multiple devices on one SCADA Mapping and multiple SCADA Mapping on 701 Client
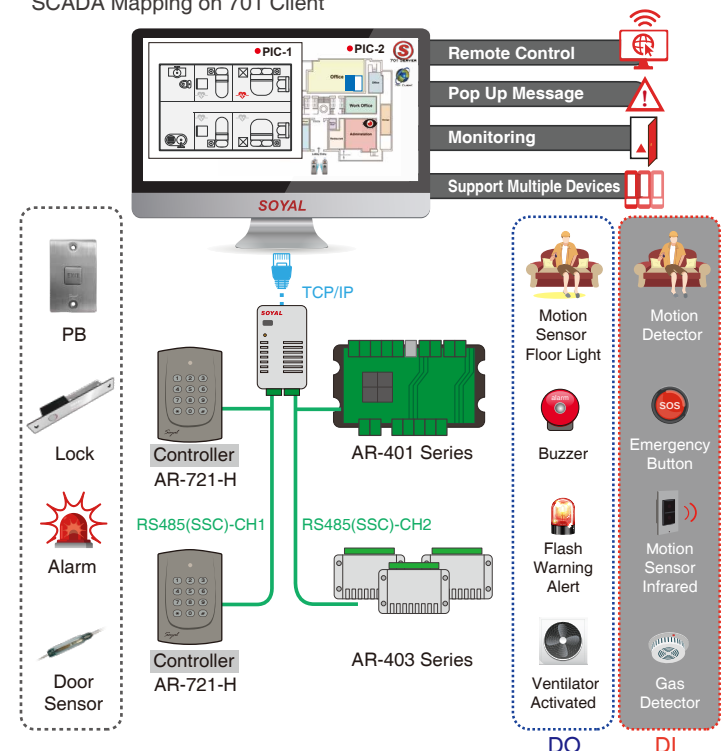
PERIPHERALS / ACCESSORIES

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-721-H

NETWORKING

● Software

701 Server 701 Client

ISP Tools

File Based & Data Based Interchangeable Software for Access Control, Time Attendance , Status Monitoring and Configuration
701 Server & 701 Client

Firmware Upgrade
ISP Tools

● Signal/Interface Converter

USB
RS232

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

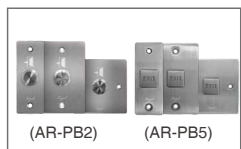### ● Large User Capacity & Multi-Door AntiPassback

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

● Nation Series

(AR-327-E)   (AR-727-E)

16.000 User IP Based Access Controller
AR-327-E / AR-727-E
Wiegand Reader
AR-723-U

● External Relay Output
(Alarm & Security Trigger Alarm)

(AR-PB2)   (AR-PB5)

(AR-721RB)   (AR-821RB)   (AR-829RB)

Stainless Steel Push Button
AR-PB2 & AR-PB5 Series
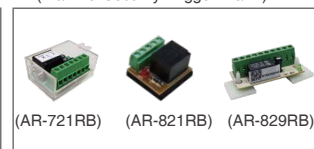
1 Form C relay with time delay
AR-721RB
1 Form C relay
AR-821RB
2 Form C relay
AR-829RB

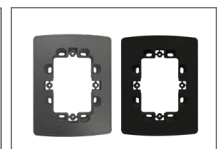### ● Necessary

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 Keyfob

● Installation Mounting Panel

Color: Gray / Black
AR-HT-98128

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 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.