

SOYAL[®]

Mini 101 Series **AR-101-H** Access Controller

Flush-Mount MINI and compact access controller built-in RS485 interface and support keyless editing.



Panel Varieties

Plastic panel in silver & black color and stainless steel panel that differ from slim US type, rectangle US type, and Square EU type.

Coin Controller

It is only as big as a coin, suitable for most installation that only have remaining small space for access controller

Bi-Color LED Ring Indicator in Flush Mount Design



Green LED:
Swipe Valid Card / Standby Mode / Arming



Red LED:
Swipe Invalid Card / Alarming

Wiegand Keyboard for Quick Configuration Setting

Set up configuration and edit user card setting by entering command with external Wiegand Keypad. After you done setting up, unplug from AR-101-H and plug it again if you need to do setting.

Features



Lift Control



Alarming for Abnormal Event



Keyless Editing



Arming and Disarming



Watchdog



Anti-Passback



Web



Youtube

- 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)
- Keyless Editing with Master Card
- In-Field Firmware Upgrade
- Arming / Force Alarm / Unclose Alarm
- Multi Output: Door lock output (0.1-600 sec. and toggle mode) & alarm output (1-600 sec.)
- Support One and Half Door, and One and Half Door Anti-Pass-back
- Silent Operation Mode: Push Button and All Mute
- 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) for salary counting and auto open time zone setting.
- 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	13.56MHz	
Supported Tags	ISO 14443 Mifare Ultralight, Classic, DESFire EV1 NFC (card simulation)	
Crypto	CC Certification: 3DES Crypto comply with EAL4+	
RFID Reading Range	1-3CM	
UID Bits	24~32 (Adjustable)	
DI/DO	Digital Input	Egress / Door State
	Digital Output*	Door Lock / Alarm
*Required External Relay Output Module		
Doors/Floors Number	1.5 Doors / 32 Floors	
User Capacity	1024	
Event Log	1100	
Indicator	LED	Bi-Color LED Ring Indicator Red= swipe invalid card / alarming status Green= swipe valid card / standby mode
	Buzzer	1
Extend Port	Wiegand 24~34 (support external Wiegand Keyboard)	
Dimension (mm)	37(H)X 37(W)X31(D)	
Housing Material	ABS	
Color	Black Label Sticker (Customization Label Available by Order)	
Weight (g)	approx. 30	
Power Consumption	<3W	
Power Voltage	9-24VDC	
Ingress Protection	NO	
Enviroment	Operating Temperature	-20°C ~ +70°C
	Storage Temperature	-40°C to +75°C
	Operating Humidity	0%~90% (non-condensing)
	Storage Humidity	0%~95% (non-condensing)

WHAT WE OFFER



High Durability

Each Soyal material is made with finest material that meet RoHS compliance and Industrial Grade, provides you a high durability hardware that works well in every environment.



Wide Range Solution

To satisfy customer aesthetic, Soyal applied aesthetic design and co-ordinate to Soyal Series. Match AR-101-H with Other Mini 101 Series. We offer identical design between access controller, access reader, and push button to complete your installation and aesthetic on matching it with one another.



Anti-Cloning and Anti-Duplicate

We provide anti-cloning and encryption for the whole system to tighten up the security. By this mean, only tags paired to AR-101-H and as well as access reader can have access, other than that we don't even recognize the tags.



Expandable User Capacity

When scaling your system it is not only having more hardware, higher security level, and more spaces to control; it also mean 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.



Beyond Access Controller

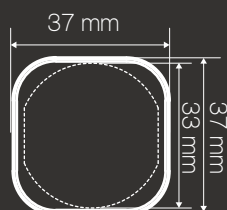
Each product manufactured by Soyal was made for total solution and to offer flexibility. For intense, Soyal main product is access controller but you can found Soyal on other application like offline consumption device, charging device, and many more just by changing its firmware.



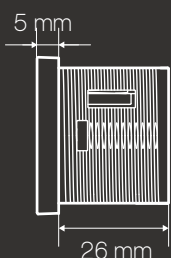
No Exclusivity, Open Integration Resources

SOYAL provides open resources such as SDK and protocol document that have 'no-exclusivity and open source integration' characteristic, compatible with other system integration. We offer integration with SOYAL software or directly with SOYAL hardware. For web based, SOYAL protocols can easily corresponding to JSON interface that is suitable for GraphQL and Julia developer.

INSTALLATION(mm)

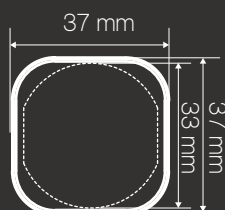


(Front View)



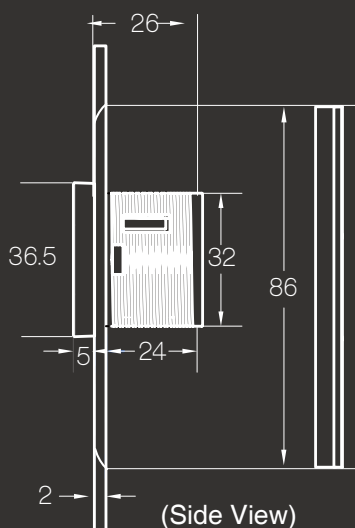
(Side View)

▲ Standard



(Front View)

▲ With Panel



(Side View)

(US)

(EU)



Stainless Steel Panel
DMET-101PJ



Plastic Panel
DPLA-PB

▲ Optional Panel

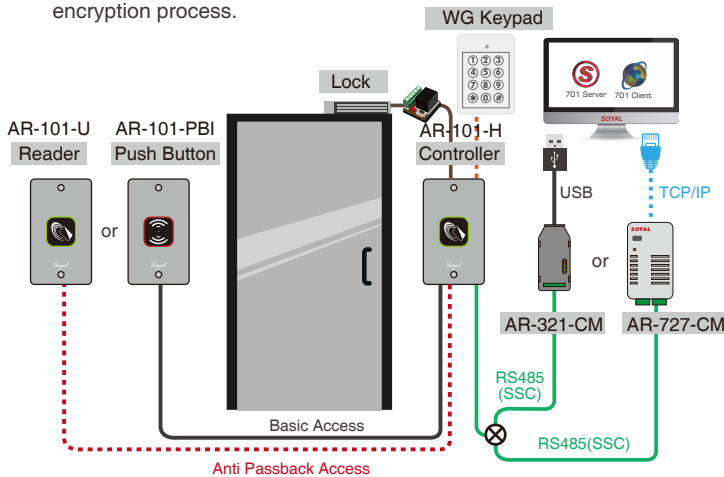
APPLICATION & STRUCTURE DIAGRAM

● 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-101-H with Soyal converter to PC for configuration via SOYAL Software or for anti-cloning and encryption process.

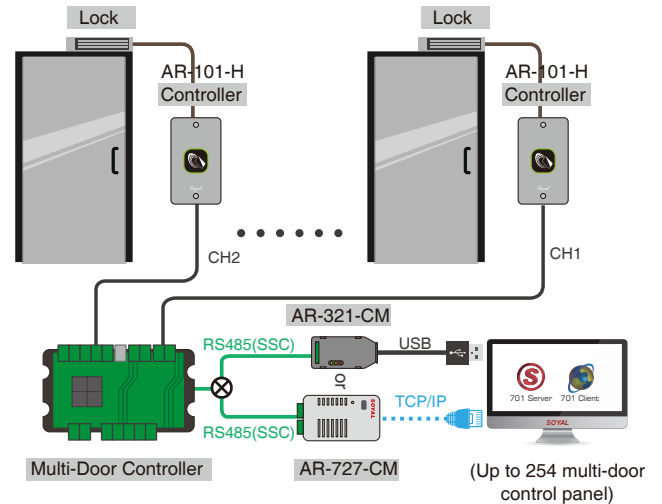


--1024 User, 11 Timezone--

● CASCADE STRUCTURE

Upgrade user capacity without replacing AR-101-H installed with additional hardware of SOYAL Multi-Door Control Series.

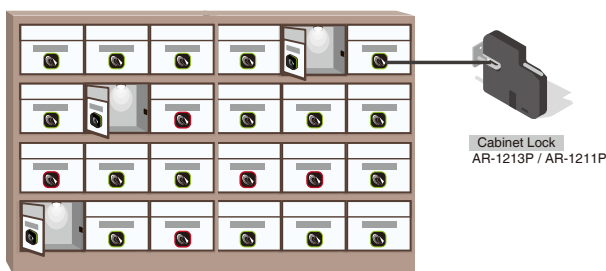
Under Multi-Door Control Panel, when RS485 communication is working normally, AR-101-H will be a Slave Reader of Control Panel. Once its communication is cut off, AR-101-H will automatically be Access Control and have control on its user and parameter setting.



--16000 User, 63 Timezone--

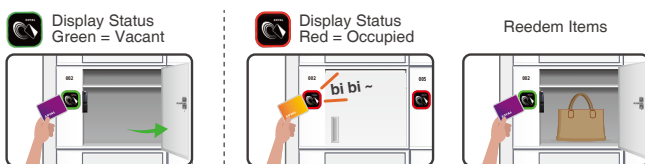
● MAILBOX / STORAGE

access your own mailbox or storage without traditional key, but with card, tags, or even your cellphone supported NFC.



Membership Storage System

Each AR-101-H installed on the storage can only give access to vacant storage.



Suitable for **public space**: Storage rental or membership storage at fitness center and library.

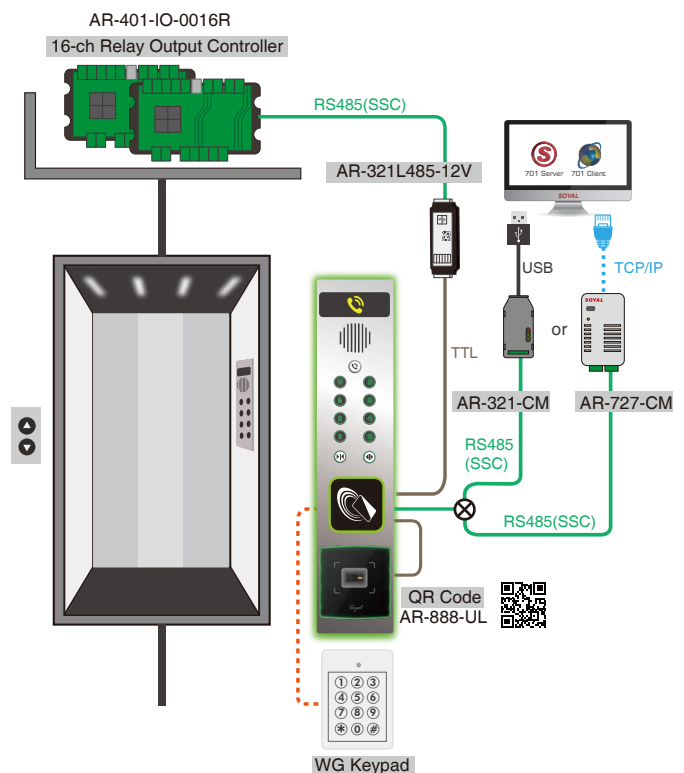
One Person One Storage

Each AR-101-H installed on the mailbox/storage can only read configured valid card for each controller.

Suitable for **private space**: Apartment building, campus locker, and office storage.

● LIFT CONTROL SOLUTION WITH VISITOR MANAGEMENT SYSTEM

Support up to 32 floors, restrict and grant access for each user on particular floors and time zone for lift control on particular time for particular floor. For temporary visitor, additional AR-888UL with QRCode will provide access with limited time only. QRCode can be obtained from receptionist with printed or emailed QRCode.



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-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



AR-101-H

NETWORKING

• Software



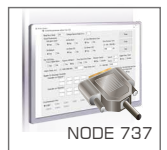
File Based & Data Based
Interchangeable Software for Access
Control, Time Attendance , Status
Monitoring and Configuration

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

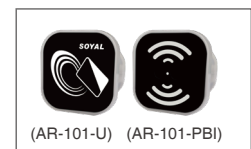
• Large User Capacity & Multi-Door AntiPassback



Multi-Door Control Series

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

• Mini 101 Series



Wiegand Reader

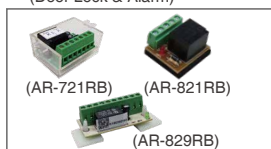
AR-101-U

Touchless Infrared Push Button

AR-101-PBI

• External Relay Output

(Door Lock & 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-WGKBA07)

• Necessary



Keyless Editing

Self programmed master card



Power Supply

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



Proximity Tags

13.56MHz: Mifare Classic,
Mifare Desfire, UltraLight
Tags Selection: Thin Card,
Round Keyfob, Square Keyfob

FAQ

Q: How to configure and add or delete user on keyless editing?

A:

- Under standalone mode, configuration and add or delete user can be done with Wiegand Keyboard by sending command to controller. Or you can also set up to three master cards for each controller to quickly add and delete users.
- For networking, [Node737](#) Software provide easy setting for keyless controller or you can also choose [701Client](#) for more detailed setting and [Commview](#) by sending protocol command. All Soyal software are available for downloading on Soyal website.

Q: What is the difference between 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