

SOYAL[®]

Control Panel Series

AR-716-E18/AR-716-E16/AR-716-E02

Expand user capacities and extend functions never been that easy



Multiple Communication Port

Built-in RS485, Ethernet, and Wiegand Port on host and slave channel, provides compatibility and flexibility to access control, access reader, and I/O series.

Communication Redundancy (only for AR-716-E16)

Support RS485 and TCP/IP interface; while one communication is failed, another interface could work as a back-up to make system keep on running.

Fallback Mode

If communications are lost access controller under control panel will automatically enters fallback mode; to carry on normal access operations using its local database then automatically send stored data to host when communication is reconnecting to host.

Remote Terminal Unit

Performed as a RTU, a gateway between host and connected hardware; transmit data to host and using the data stored on host database system, control and monitor the connected hardware remotely.

Stay Safe with Wiegand Encryption

To protecting vulnerable attack on Wiegand Reader, SOYAL provides encryption for Access Reader Series for hardware and RFID tags.

Eliminate Wiegand Signal Distance Limitation

To solve limited signal distance problem, through combination of AR-716-E18/AR-716-E16 with AR-716-E02, convert the Wiegand Signal to RS485 to achieve longer signal distance but still preserving the security elements.

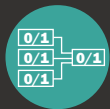
Features



Watchdog



Complete LED Indicator



Communication Encryption (SSC)



Accurate Time Management



In-Field Firmware Upgrade



Anti Passback



Web



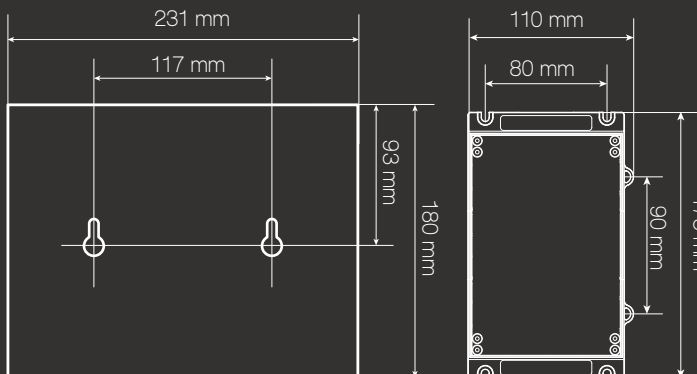
Youtube

- Support RS485 communication encryption, SSC (Soyal Security Communcation)
- Built in watchdog to prevent hanging up
- Automatically release all locked doors under fire alarm event and at the same time send real time notification.
- Expansion I/O control available to let door remain locked, even when force open occurred.
- Built in power and data transmission LED indicators for convenient debugging and status judgement.
- Auto arming and disarming setting and up to 12 sets of auto scheduled alarm.
- Multi-door anti passback and forgiveness anti passback (auto reset)
- Sets of timezone, door group, and access level

SPECIFICATION

Model No.		AR-716-E18 18 Doors Networking Control Panel	AR-716-E16 16 Doors IP Control Panel	AR-716-E02 2- Doors Networking Control Panel	
User Capacity		15000	16000 / 32000 / 65000	3000	
Event Log		11000	32000	1500	
Power Voltage		9-24VDC	9-24VDC	9-24VDC	
Power Consumption		<2.5W	<3W	<2W	
Communication interface	Host	Host	Support Node ID 1-254	Support Node ID 1-254	
		RS-485	9600bps(N,8,1)	9600bps(N,8,1)	
		Ethernet	*TCP/IP Module AR-727i-V3 (Optional)	10/100M Base T TCP/IP Module DMOD-NETMA (Optional)	—
	Slave Reader	CH1(RS-485)	8 Readers	8 / 6 Readers	—
		CH2(RS-485)	8 Readers	8 / 8 Readers	—
		WG	2 Readers	0 / 2 Readers	2 Readers
		Note: SOYAL access controller wired under control panel RS485 CH1/CH2 will become slave reader mode. Support Fallback Mode for allowing access through local database when communication is lost (return to its Access Controller mode) *Optional for Ethernet connection			
DI Input		4+8 (AR-716-IO) Egress / Door State / Fire Input	Egress *2 / Door Status*2 / Fire Alarm*1	Egress *2 / Door Status*2 / Reserved DI*1 / Fire Alarm*1 / Tamper Input *2 (for Wiegand Reader)	
DO Output		4+8(AR-716-IO) Door Lock Relay / Alarm Relay	Door Lock Relay *2 / Alarm Relay *1	Door Lock Relay *2 / Alarm Relay *1 / Reserved DO *2 / Reserved Relay *1	
Anti-Passback		16 Doors (IN & OUT assignable)	16 Doors (IN & OUT assignable)	2 Doors (IN&OUT)	
Door Group		255 Group	User Independent	—	
Time Zone		63 Set	63 Set	11 Set	
		Setting up with Link, Level, and Holiday Edit is available to achieve unlimited door group and timezone, and different authorization level between each user.			
Dimension(mm)	Metal Casing	180(H)x231(W)x62(D)	180(H)x231(W)x62(D)	180(H)x231(W)x62(D)	
	Mounting Plate	—	110(H)x175(W)x32(D)	110(H)x175(W)x32(D)	
	PCB	150(H)x163(W)x20(D)	110(H)x175(W)x32(D)	110(H)x175(W)x32(D)	
Net Weight(g)	Metal Casing	approx. 1850	approx. 1780	approx. 1770	
	Mounting Plate	—	approx. 240	approx. 230	
	PCB	approx. 200	approx. 120	approx. 110	
Housing Material		Metal	Metal/ABS	Metal/ABS	
Environment		Operating Temperature :-20°C ~ +65°C / Storage Temperature :-25°C ~ +70°C Operating Humidity :20%~90% / Storage Humidity :5%~95%			

INSTALLATION(mm)



▲ Metal Box

▲ Plastic Mounting Base

HOW TO ORDER

AR-716-**EXX**-**X**-**X**

Doors No.
02=Dual Doors (WG)
16=16 Doors (RS485)+ 2 WG
18=18 Doors (RS485)+ 2 WG

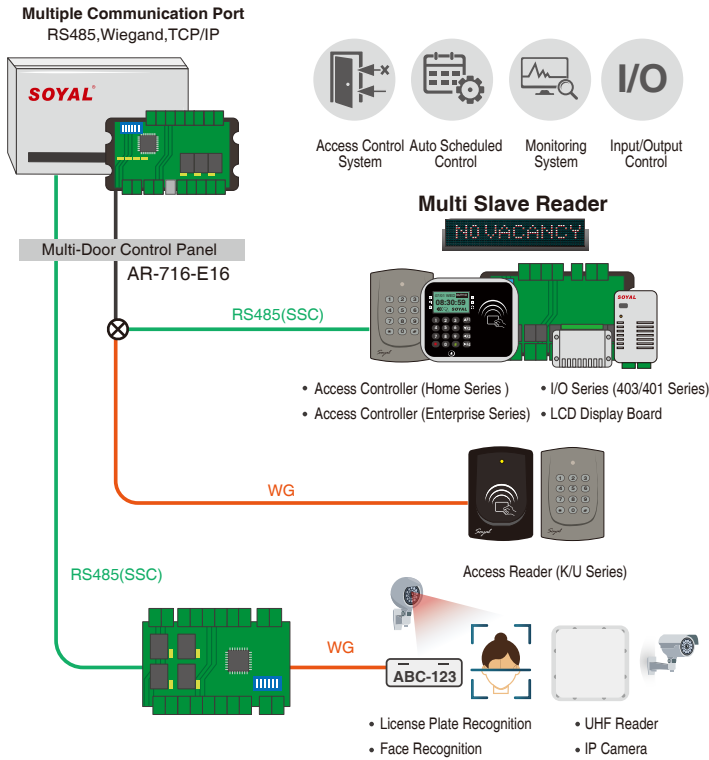
Additional Module
A=TCP/IP Module

Type
N/A=PCB
M=Metal Case
X=Plastic Mounting Base
 (AR-716-E18 does not have plastic mounting base option)

APPLICATION & STRUCTURE DIAGRAM

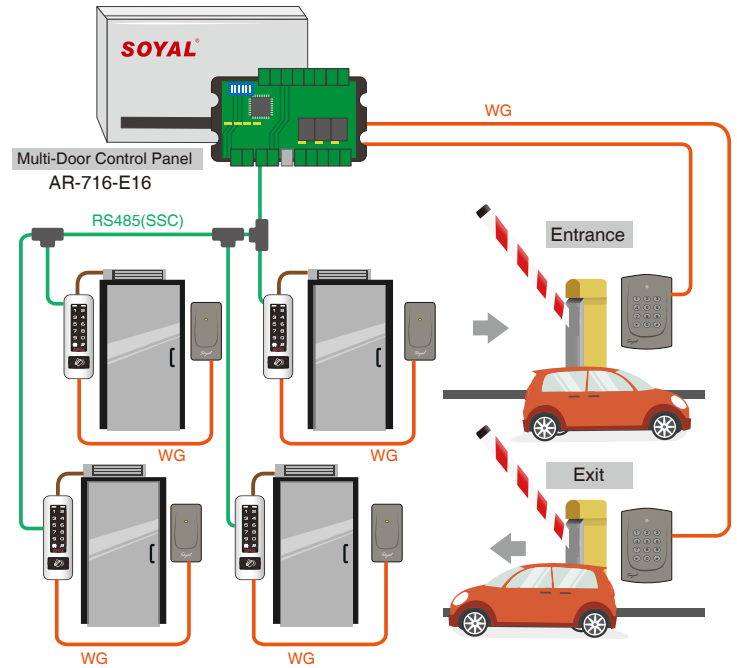
● MULTIPLE COMMUNICATION PORT, SLAVE HARDWARE, AND FUNCTIONS

Seamless scaling up system from small to big system with multiple communication port supported that compatible with multi slave reader interfaces and types to achieve total solution in access control system, auto scheduled control, monitoring system, and I/O control.



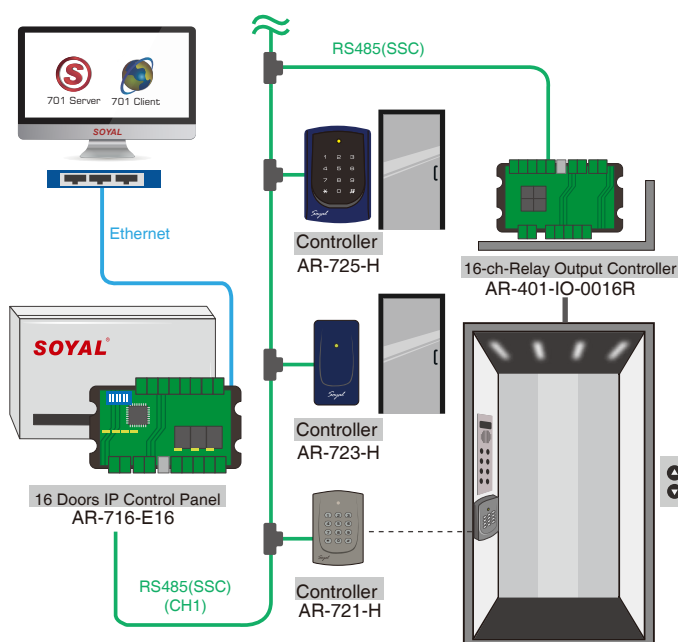
● MULTI-ENTRY ANTI-PASS BACK ACCESS IN PARKING

In order to prevent anti-trailing and valid tags used for multiple different users, anti-pass back function of multi-door panel is widely used in parking management system. After anti-pass back is enabled, the same card must be swipped both on Entry and also Exit. That way, it could prevent other car from trailing and the safety in parking is greatly improved.



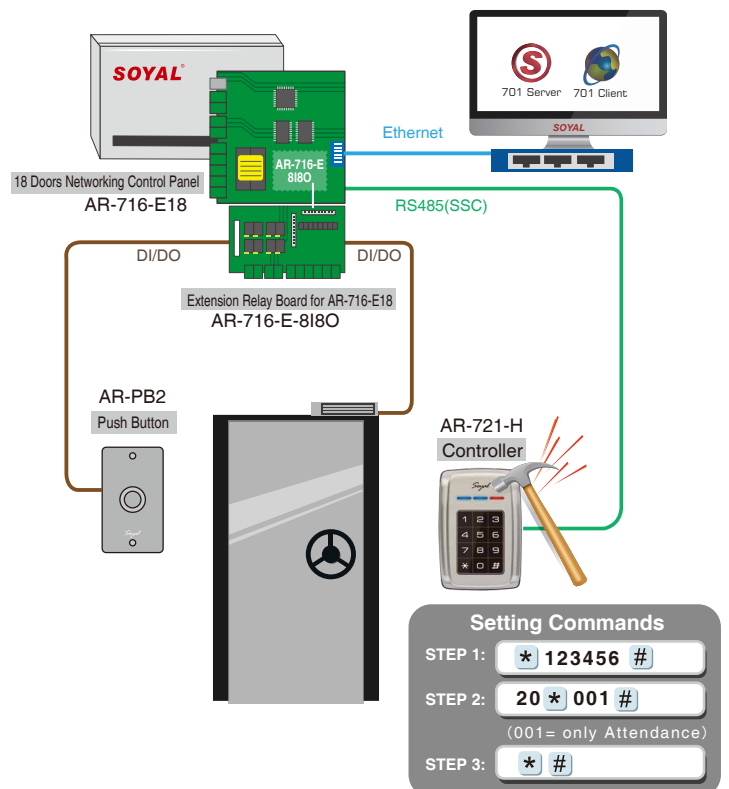
● CENTRALIZED LIFT CONTROL STRUCTURE

One Multi-door control panel AR-716-E16 can manage up to 16000 users to have access for total 56 lifts with up to 64 floors access on each lift. Installing multi-door control panel in Center Control Room wired directly to computer, allowing manager to easily set up parameters and edit user floors card at any time. The lift control panel installed in the equipment room on top of the building is more convenient for inspection and maintenance.



● ENHANCE ACCESS CONTROL SECURITY SYSTEM

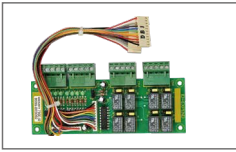
Multi-door controller can connect one I/O Extension Board AR-716-8180 that directly connect with Door lock and Exit button for higher security door access control; Even if the door is forcibly damaged, the door lock can not be unlocked



PERIPHERALS / ACCESSORIES

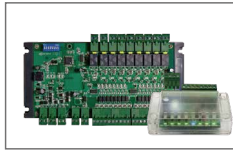
EXPANSION I/O CONTROL

- Expansion I/O Control



Extension Relay Board for AR-716-E18

AR-716-E-8180



I/O Modules for AR-716-E16

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

- WG Reader



Proximity Reader

AR-321-U



Proximity Reader

AR-101-U / AR-101-PBI

- RS485 Controller



Home Series Access Controller

AR-723-H / AR-321-H / AR-721-H



Enterprise Series Access Controller

AR-327-E / AR-727-E

- Control Panel Series



2 Doors Networking Control Panel

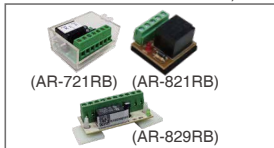
AR-716-E02

- Necessary
- External Relay Output
- Extended Applications



Power Supply

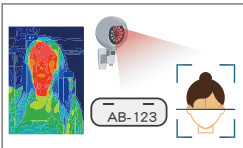
BP-W12-1500 (1.5A)
BP-W15-2400 (2.4A)



1 Form C relay with time delay

AR-721RB

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



Infrared Thermo-Camera, LPR (License Plate Recognition)

NETWORKING

- Software



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

701 Server & 701 Client



Firmware Upgrade for AR-716-E18

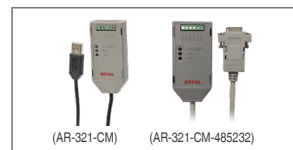
ISP Tools



Firmware Upgrade for AR-716-E16

UDP Updater

- Signal/Interface Converter



USB to RS485

AR-321-CM

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)

- Ethernet Module



Ethernet Module for AR-716-E18

AR-727i-V3



Serial-to-Ethernet Networking Module for AR-716-E16

DMOD-NETMA-2

- 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 / Push Button / Alarm/Siren / Burglary Security System

FAQ

Q: What are the main features and advantage of 2-Door WG Control panel?

A: Built-in 2 WG port that can be connected with 2 WG slaver reader to realize two doors entry and exit and two door interlock ; Built-in RS485 interface that can expand to 32-doors Anti-pass back when connected to Multi-door controller.

Q: How to receive Alarm event when RS485 reader connected under Multi-door controller is disconnected?

A: Enable the function option " On K2 While Reader Off Line " on AR-716-E18 Parameters setting menu of **701Server software**; then connect alarm output or SIM device via Relay K2, offline event can be real-time sent to mobile phone via SMS devices or send via E-mail

