# SOYAL®

## Multi-Door & Large Capacity Control

# AR-716-E18

## IP-Based Multi-Door Control Panel (18 Doors)

Designed for large access control structure, large user capacity control and parking lot access management

### Communication Redundancy

Support TCP/IP and RS485. When TCP/IP disconnects, deputy RS485 communication automatically works to maintain normal communication

### Time Management

Built-ine RTC (Real Time Clock) for accurate date and time calucation and built-in watchdog that can prevent the device from hang up.

### Large Scale Architecture

Can connect Wiegand/RS485 reader and flexibly adjust accessible door quantity. With AR-716-E02, can connect Wiegand controller for 32 doors, at the same time solve Wiegand limited transmission distance

### Support Uniterrupable Power Supply

Be able to connect one UPS Power supply AR-716-TC-P to keep the device running during power outage to enhance system safety

### Installation Design

Complied with Industrial standard and locking design; Quick-release terminal design for wiring, convenient for installation and maintenance

## Features

| Multi-door Anti-passback | Release All Door Locks in Fire event | Multiple LED indicator | Auto-Scheduled Bell Output | Expansion I/O Control | Communication Redundancy |
|---|---|---|---|---|---|

Web    Youtube

- Each unit support 16 RS485 reader, 2 Wiegand Reader, 4 relay output, 4 digital input include fire alarm release all doors, and additional 8I8O extension I/O module is available
- Support RS485 / Ethernet communication interface for networking connection to LAN/ WAN / ADSL ; Support communication protocol of TCP/IP, DHCP, ICMP, ARP
- Support Auto-Arming/Disarm Zone Setting
- Support alarm output while devices are disconnected
- Support 14+2 doors anti-passback; be able to assign which door is for entry and which door is for exit and trigger Alarm output when Anti-pass back error ; Anti-pass back status can be automatically reset by time zone setting.

- Built-in power and data trasmission LED indicators for convenient debugging and status judgement.
- Support 4 sets of passwords to control devices from readers and Auto-scheduled bell output connected through built-in 4 sets of Relay
- Support communication encryption SSC (Soyal Security Communication)
- 63 sets of time zone / 255 sets of door group, be able to set holiday and level, linked to other zones
- Built-in power, signal transmission indicators, watchdog to prevent hanging up, alarm output when devices disconnect, two Wiegand input ports, multi-door anti-passback setting and time zone auto reset
- Alternative door group selection: common door group or individual door group
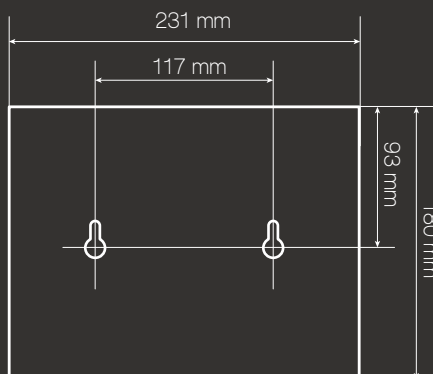
# SPECIFICATION

| Interface | Host | RS-485or TCP/IP | RS485：9600bps or TCP/IP：10/100M Base T （External Module） |
|---|---|---|---|
| | Slave Reader | CH1(RS-485) | 8 Readers |
| | | CH2(RS-485) | 8 Readers |
| | | WG | 2 Readers |

| Door Numbers | 18 |
|---|---|
| User Capacity | 15000 |
| Event Log | 11000 |

| DI/ DO | DI | Built-in | Engress X2 / Fire Alarm input X1 Reserved DI X1 |
|---|---|---|---|
| | | External I/O extension board (AR-716-E-8I8O) | 8 |
| | DO / Relay Output | Built-in | Door Lock Relay X2 / Alarm Relay X1 Reserved RO X1 |
| | | External I/O extension board (AR-716-E-8I8O) | 8 |

| Watchdog Function | Standard |
|---|---|
| Power Supply | 9-24 VDC |
| Power Consumption | <2.5W |
| Communication Redundancy | NO |
| Anti-Passback | 16Doors |
| Door Group | 255 |
| Time Zone | 63 |
| Others | Support UPS (purchasing external rechargable battery ) |

| Dimension (mm) | PCB | 180(H)x231(W)x62(D) |
|---|---|---|
| | With Metal Casing | 150(H)x163(W)x20(D) |

| Net Weight (g) | PCB | 250±10 |
|---|---|---|
| | With Metal Casing | 1840±10 |

| Environment | Operating Temperature | -20℃ ~ +70℃ |
|---|---|---|
| | Storage Temperature | -40℃ ~ +75℃ |
| | Operating Humidity | 0%~90%(non-condensing） |
| | Storage Humidity | 0%~95%(non-condensing） |

# WHAT WE OFFER

## Built-in LED Indicator

Built-in power and data trasmission LED indicators for convenient debugging and status judgement

## Release All Door Locks in Fire event

Built-in DI Fire alarm contact that can be connected with fire alarm input detector; All door locks can be released in case of Fire or emergency accident occurs

## Multi-door Anti-passback

It is capable of accomplishing up to 16 Entry & Exit management in door control or car-parking system.

## Communication Redundancy

Support Dual Communication interface RS485 and TCP/IP; While one of interface is failed, another interface can be worked as backup to make the system runing.

## Expansion I/O Control

Be able to connect I/O Extension Board for higher security door access control that the door lock can not be unlocked even if the door is forcelly damaged ; The built-in 4 Relays can be triggered simultaneously with the door relay of reader for different application such as rolling door control / Indoor lighting control / Air condition Control

## Auto-Scheduled Bell Output

Be able to set 12 sets of Anto-bell time zone; connect bell output / broadcast system via 4 built-in relay on controller itself.

# INSTALLATION(mm)

231 mm
117 mm
93 mm
180 mm

▲ Metal Box

# HOW TO ORDER

## AR-716-EXX-X-X

**Additional Module**
A=TCP/IP Module

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

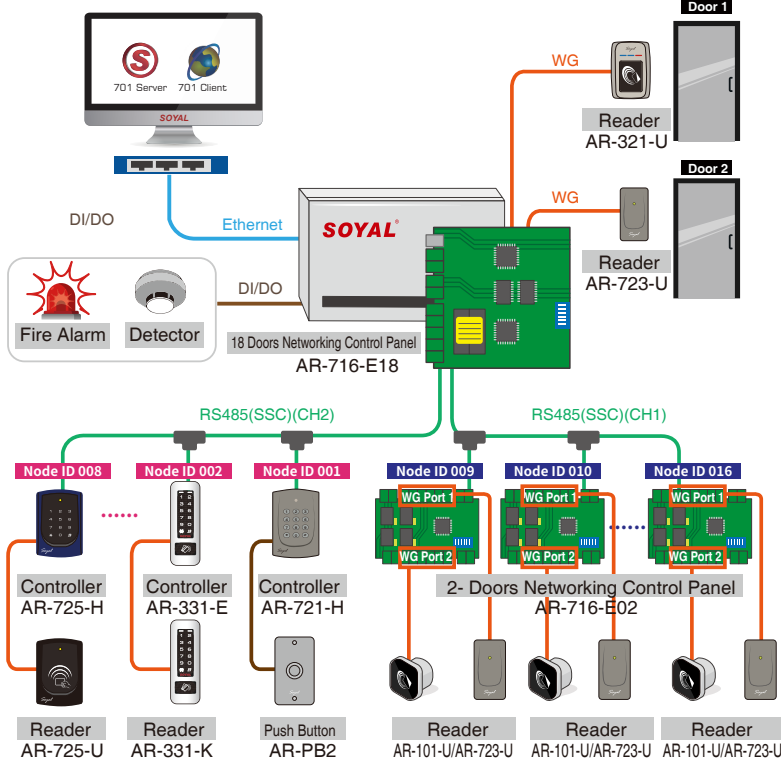**Type**
N/A=PCB
M=Metal Case
X=Plastic Mounting Base
(AR-716-E18 does not have plastic mounting base option)
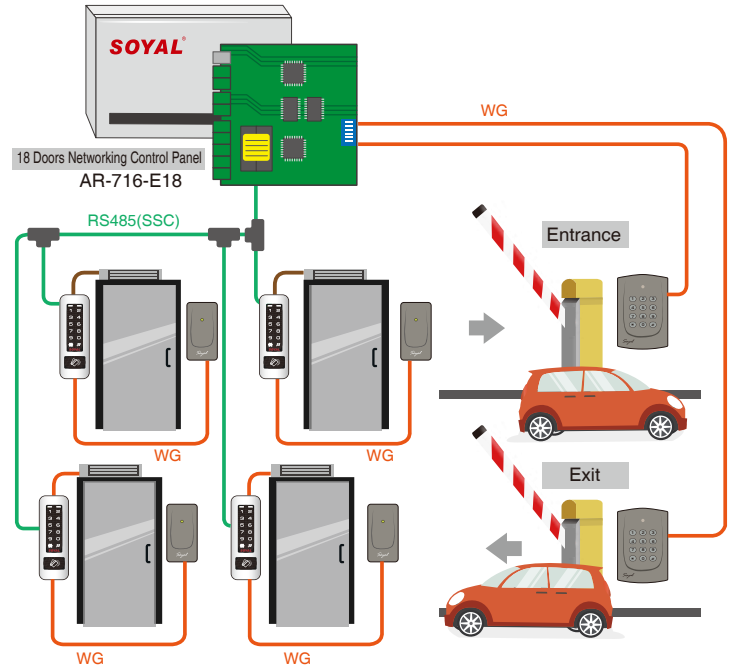
# APPLICATION & STRUCTURE DIAGRAM

## ● BASIC STRUCTURE FOR MULTI-DOOR CONTROL

One Multi-door controller can connect many different types of RS485 readers and WG readers for Multi-door access control and Single / Global Anti-pass back access.

701 Server    701 Client

DI/DO
Ethernet
DI/DO

Fire Alarm    Detector

18 Doors Networking Control Panel
AR-716-E18

Door 1
WG
Reader
AR-321-U

Door 2
WG
Reader
AR-723-U

RS485(SSC)(CH2)          RS485(SSC)(CH1)

Node ID 008    Node ID 002    Node ID 001    Node ID 009    Node ID 010    Node ID 016

WG Port 1    WG Port 1    WG Port 1
WG Port 2    WG Port 2    WG Port 2

Controller    Controller    Controller
AR-725-H     AR-331-E     AR-721-H

2- Doors Networking Control Panel
AR-716-E02

Reader       Reader       Push Button
AR-725-U     AR-331-K     AR-PB2

Reader              Reader              Reader
AR-101-U/AR-723-U   AR-101-U/AR-723-U   AR-101-U/AR-723-U
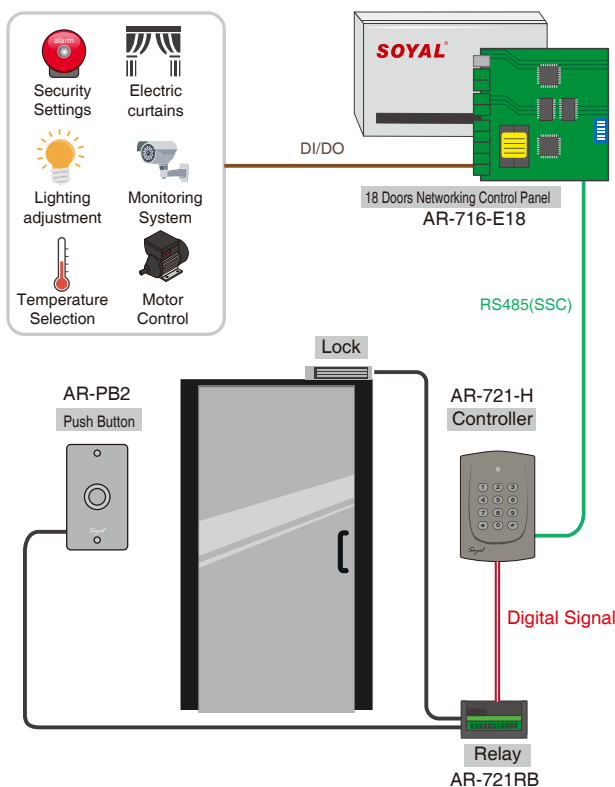
## ● MULTI-ENTRY ANTI-PASS BACK ACCESS IN PARKING

In order to Anti-trailing from other cars or prevent one card to use for different users, Anti-pass back function of Multi-door controller is widely used in Parking managment system. After Anti-pass back is enable on User card and RS485 readers / WG readers, the same card must be swipped both on Entry and also Exit. that can prevent other car from trailing and the safety in Parking is greatly improved.

18 Doors Networking Control Panel
AR-716-E18

RS485(SSC)

WG

Entrance

WG          WG
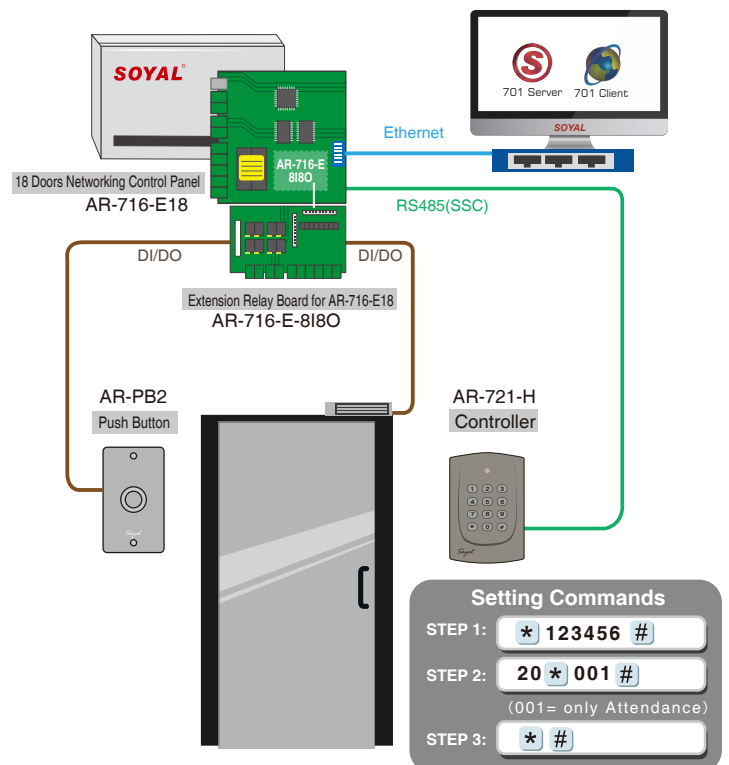
Exit

WG          WG

## ● REMOTE CONTROL

Multi-door controller is built-in 4 sets of DI/DO; 4 relays can be assigned relay numbers to trigger operated by keypad reader for different application such as lighting control , Electric curtain control , Air condition Control and Auto-scheduled output.

Security Settings    Electric curtains

Lighting adjustment    Monitoring System

Temperature Selection    Motor Control

DI/DO

18 Doors Networking Control Panel
AR-716-E18

RS485(SSC)

Lock

AR-PB2
Push Button

AR-721-H
Controller

Digital Signal

Relay
AR-721RB

## ● ENHANCE ACCESS CONTROL SECURITY SYSTEM

Multi-door controller can connect one I/O Extension Board AR-716-8I8O that directly connect with Door lock and Exit button for higher security door access control; Even if the door is forcelly damaged, the door lock can not be unlocked

18 Doors Networking Control Panel
AR-716-E18

AR-716-E-8I8O

Ethernet

701 Server    701 Client

RS485(SSC)

DI/DO          DI/DO

Extension Relay Board for AR-716-E18
AR-716-E-8I8O

AR-PB2
Push Button

AR-721-H
Controller

### Setting Commands

STEP 1:  ✱ 123456 #

STEP 2:  20 ✱ 001 #

(001= only Attendance)

STEP 3:  ✱ #

# PERIPHERALS / ACCESSORIES

## EXPANSION I/O CONTROL

### • Expansion I/O Control

**Extension Relay Board for AR-716-E18**
AR-716-E-8I8O

**Uninterruptible Power Supply**
AR-716-TC-P

### • WG Reader

**Proximity Reader**
AR-723-U

**Proximity Reader**
AR-101-U/ AR-101-PBI

**AR-716-E18**

**Proximity Reader**
AR-321-U

**Proximity Reader**
AR-721-K

**Proximity Reader**
AR-725-K

**Proximity Reader**
AR-888-K/U

### • Necessary

**Power Supply**
BP-W12-1500 (1.5A)
BP-W15-2400 (2.4A)

### • External Relay Output (Digital Security Relay / Arming / Duress / Alarm)

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

**2 Form C relay**
AR-829RB

## 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

### • Signal/Interface Converter

(AR-321-CM) (AR-321-CM-485232)

**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 for AR-716-E18**
AR-727i-V3

### • RS485 Controller

**H Series Access Controller**
AR-723-H / AR-321-H / AR-721-H

**E Series Access Controller**
AR-327-E / AR-727-E

### • Multi-door Control Series

**2 Doors Networking Control Panel**
AR-716-E02

### • 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**

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## FAQ

**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 evnt can be real-time sent to mobile phone via SMS devices or send via E-mail

**Q:** How to keep controller and reader running normally when the power failure ?

**A:** AR-716-E18 support UPS function but need to purchase one external rechargable battery that can provide power and keep the device running normally when the power failure.