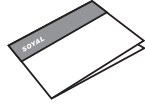
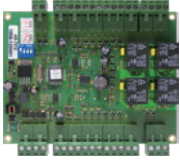


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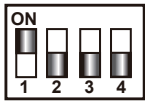
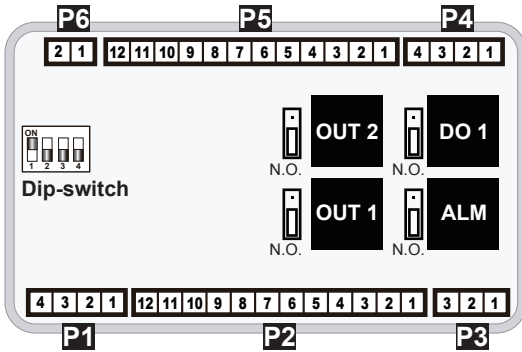


- Separate controller connected to 2 WG readers, can enhance the security of the system.
- Can connect to Door Open Button, Door Sensor, and Tamper Switch.
- When Door open to Long or Force open, it's can be detected.
- 4 Control Mode, allowing users the flexibility of use with.
- Can automatically determine to use stand-alone or networking.

Specification

| | | | | | |
|---------------------|--------------------------------|-------------------|--|-----------------|------------------------------|
| CPU | 8 bit CPU | Temperature | -20°C ~ +60°C | Event log | 1456 |
| RAM | 512 k Bits | Digital Input | 2 Door Open Button/ 2 Door Sensor/ 2 Housing open detection/ Prepared for 2 DI | Aux. WG Port | WG 26 / WG 34 |
| Power Supply | 10 ~ 24 | Relpy Output | 2 Door Relay/ 1 Alarm Relay/ Prepared for 1 Relay output | Anti-pass-back | YES |
| Power Consumption | < 3W | Transistor Output | Prepared for 2 DO | Lift Control | NO |
| Interface | RS-485 | Door Relay Time | Toggle, 0.1~600Ses | Time Zone | 63 (stand-alone /networking) |
| Baud Rate | 9600 bps,N,8,1 | Alarm Relay Time | Toggle, 0.1~600Ses | Real Time Clock | YES |
| External WG Readers | 2 WG (Controller power supply) | User Capacity | 3,000 | DIP_SW | 4 (Node ID: 1~16) |

Connector Table



• Node ID is setting by DIP_Switch
Node ID: 01~16

| DIP SW | 1 | 2 | 3 | 4 |
|------------|-----|-----|-----|-----|
| Node ID 01 | ON | off | off | off |
| Node ID 02 | off | ON | off | off |
| Node ID 03 | ON | ON | off | off |
| ⋮ | | | | |
| Node ID 15 | ON | ON | ON | ON |
| Node ID 16 | off | off | off | off |

Connector: P1

| Code | Pin | Description |
|--------|-----|--------------|
| LA+ | 1 | RS-485(A+) |
| LB- | 2 | RS-485(B-) |
| GND | 3 | DC Power 0V |
| DC 12V | 4 | DC Power 12V |

Connector: P2

| Code | Pin | Description |
|------|-----|---------------------|
| COM | 1 | COM |
| OUT1 | 2 | N.C./N.O. |
| BZ | 3 | Beeper Output |
| LG | 4 | LED Green Output |
| LR | 5 | LED Red Output |
| TAM | 6 | Tamper Switch Input |
| SEN | 7 | Door Sensor Input |
| PB | 8 | Exit Switch Input |
| WD1 | 9 | Wiegand DAT:1 Input |
| WD0 | 10 | Wiegand DAT:0 Input |
| GND | 11 | DC Power 0V Output |
| 12V | 12 | DC Power 12V Output |

Connector: P3

| Code | Pin | Description |
|------|-----|------------------|
| COM | 1 | COM |
| DI2 | 2 | DI 2 |
| DI1 | 3 | Fire-alarm Input |

Connector: P4

| Code | Pin | Description |
|------|-----|-------------|
| COM | 1 | COM |
| DO1 | 2 | N.C./N.O. |
| COM | 3 | COM |
| ALM | 4 | N.C./N.O. |

Connector: P5

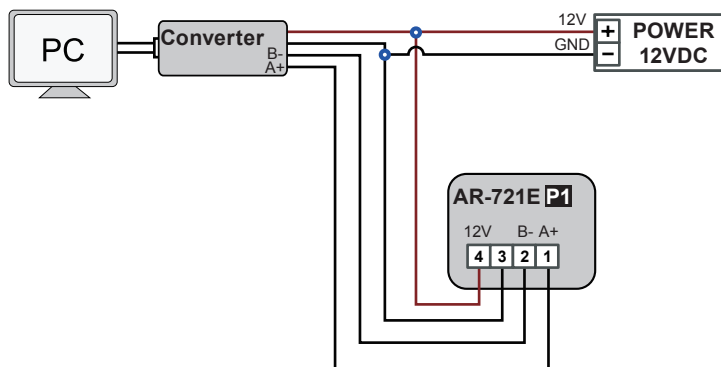
| Code | Pin | Description |
|------|-----|---------------------|
| COM | 1 | COM |
| OUT2 | 2 | N.C./N.O. |
| BZ | 3 | Beeper Output |
| LG | 4 | LED Green Output |
| LR | 5 | LED Red Output |
| TAM | 6 | N.C. |
| SEN | 7 | N.C. |
| PB | 8 | N.O. |
| WD1 | 9 | Wiegand DAT:1 Input |
| WD0 | 10 | Wiegand DAT:0 Input |
| GND | 11 | DC Power 0V Output |
| 12V | 12 | DC Power 12V Output |

Connector: P6

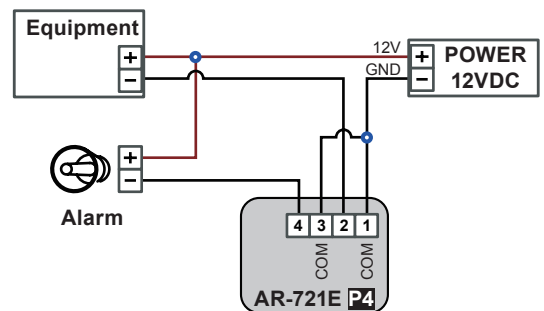
| Code | Pin | Description |
|------|-----|-------------|
| DO3 | 1 | DO 3 |
| DO2 | 2 | DO 2 |

Wiring Diagram

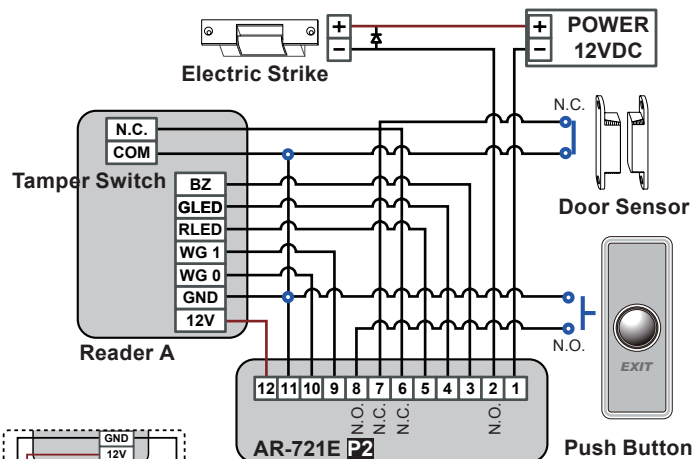
P1 Connect to PC



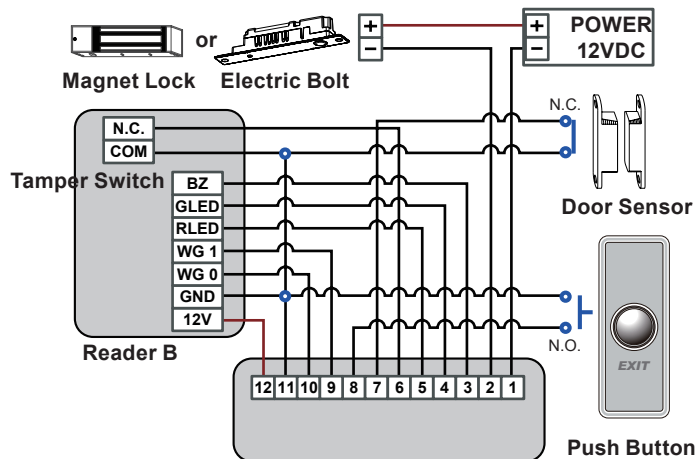
P4 Connect to Alarm or Other Equipment



P2 Connect to Electric Strike



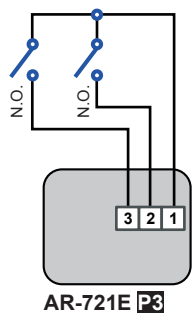
P5 Connect to Magnet Lock or Electric Bolt



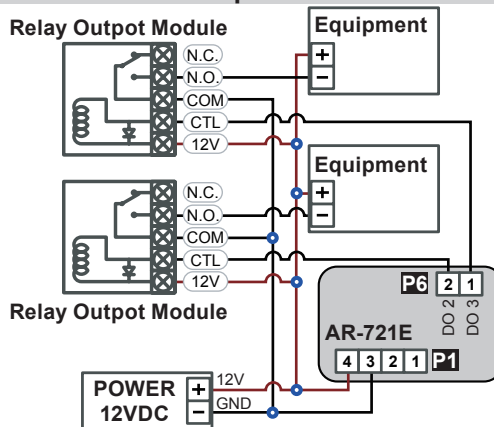
※ Notice

- If the Power line more than 100 m between the Controller and Reader, it is recommended **NOT** to use the "Wiegand Power".
- See connection mode within the dashed box, Controller and Reader must do "common-COM-point".

P3 About Digital Input



P6 About Transistor Output



Adding and Deleting Tag

• Add Single Tag or Random tags

Input *123456# (or Master Code) → 19*UUUUU*00001# → Present the tag(s) with reader (single tag or random numbered cards one by one) → Done
[e.g.] 2 random cards with user addresses No. 100 and No. 101:

Access programming mode → 19*00100*00001# → Present the tags one by one → Done

• Add the Sequential tags

Input *123456# (or Master Code) → 19*UUUUU*QQQQQ# → Present the tags (Present the tag with the lowest number first.) → OK

[e.g.] User Address NO.101 to NO.120 have 20 pcs of sequential tags:(62312~62332):

Access programming mode → 19*00101*00120# → Close Tag into RF Area(only use the tag NO.62312) → OK

• Delete a Single Tag

Input *123456# (or Master Code) → 10*SSSSS9EEEE#

[e.g.] Delete User Address: 00058

Access programming mode → 10*00058900058#

• Delete a batch of Tags

Input *123456# (or Master Code) → 10*SSSSS9EEEE#

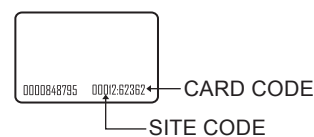
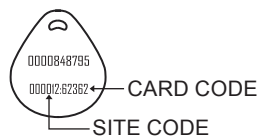
[e.g.] Delete User Address: 00101~00245

Access programming mode → 10*00101900245#

• Delete All Tags

Input *123456# (or Master Code) → 29*29*#

Tag Information



Operation process

A. Enter/ Exit Program Mode

• Enter the program mode

Input *123456# or *PPPPPP#

[e.g.] The Default Value= 123456, if already changed the Master Code= 876112, input *876112# → program mode accessed

• Exit the program mode

Input * #

• Master Code modification

Access programming mode → 09*PPPPPPRRRRR# [Input the 6-digit new master code twice.]

[e.g.] Set the Master code to be 876112, input *123456# → 09*876112876112#

B. Chang the Node ID of Reader

Access programming mode → 00 * NNN # [Node ID: 001~255]

C. Set up M4/M8

Access programming mode → 04 * N # [N=4/8]

D. Set up the password

Card or PIN: Access programming mode → 12 * UUUUU * PPPP # [e.g. User address: 00001 and pass code: 1234, input 12 * 00001 * 1234 #]

Card and PIN: Access programming mode → 13 * UUUUU * PPPP # [e.g. User address: 00001 and pass code: 1234, input 13 * 00001 * 1234 #]

E. Anti-pass-back(Reader A and Reader B must to be setting)

Usually, anti-pass-back is commonly applied to parking areas in order to prevent from multi-entry with one card at a time, or to situations need access and exit monitor.

• Controller enable

Access programming mode → 20 * DDD # [128= Anti-pass-back(0=Disable; 1=Enable)/ 064=Access/Exit(0=Exit; 1=Access).]

[e.g.] Enable Anti-pass-back, and set to Exit door=(128 x 1) + (064 x 0) = 128

Access programming mode → 20 * 128 # (Please refer to function default value for details.)

• Card enable

Access programming mode → 26 * SSSSS * EEEEE * N #

[SSSSS= User address start; EEEEE= User address end; N=0(control)/ 1(Not control)/ 2(reset)]

[e.g.] User address from 00152 to 00684 enable the anti-pass-back function: 26 * 00152 * 00684 * 0 #

[e.g.] No. 154 enable the anti-pass-back, and induction into the door has not been induced to leave. When he re-induction into the door will become invalid, then he needs to set the reset. Access programming mode → 26 * 00154 * 00154 * 2 # → Reset

F. Auto Open Time Zone

Door will keep open after the first flashing card. There are 2 time zones supported.

• Enable/Disable auto open zone

Access programming mode → 20 * 004 # [004= enable Auto-Open Time Zone; 000= disable Auto-Open Time Zone]

• Enable/Disable auto open door without presenting card

Access programming mode → 24 * 001 # [001= enable Auto-Open Time Zone; 000= disable Auto-Open Time Zone]

• Set up open time

Access programming mode → 08 * N * HHMMhhmm * 6543217H #

N: 2 sets of auto-open zone (N=0=1st set; N=1=2nd set)

HHMMhhmm=Starting time to ending time (e.g. 08301200=08:30 to 12:00)

6543217H= 7 days of week (Sat/Fri/Thu/Wed/Tue/Mon/Sun) + Holiday (F= 0: disable; 1: enable); Holidays establish by the software.

[e.g.] To set the second time zone as 9:30 AM to 4:20 PM, Monday, Wednesday and Friday: 08 * 1 * 09301612 * 01010100 # → Done

G. Setting Up the Arming

• Alarm conditions:

1. Arming is enabled
2. Alarm system connected

• Application:

1. **Door open too long:** Door is open longer than door relay time plus door close time.
2. **Force open** (Opened without a valid user card): Access by force or illegal procedure.
3. **Door position abnormal:** When power is off and then on, reader on arming before power off.

• Enable/Disable Arming status (Factory default armingcode is: 1234) :

Standby Mode

After door open

Door is not open

The normal procedure to open door → Input 4 digit arming code → #

* → Input 4 digit arming code → Present valid card

Enter Program Mode

Enable: Access programming mode → * * #

Disable: Access programming mode → * #

※ [The normal procedure to open door] can refer to [Access Mode].

Function Default Value

20 * DDD

※Default Value

| Function | Selection | | Bit | Value | Application |
|--------------------------|-------------|------------|-----|-------|------------------------|
| Attendance | ※0: Yes | 1: No | 0 | 001 | Networking |
| Auto Re-lock | ※0: Disable | 1: Enable | 1 | 002 | Networking/Stand-Alone |
| Auto Open | ※0: Disable | 1: Enable | 2 | 004 | Networking/Stand-Alone |
| Door open button input | 0: Disable | ※1: Enable | 4 | 016 | Networking/Stand-Alone |
| Master Reader of Network | ※0: Slave | 1: Mater | 5 | 032 | Networking |
| Access/Exit | ※0: Exit | 1: Access | 6 | 064 | Networking |
| Anti-pass-back | ※0: Disable | 1: Enable | 7 | 128 | Networking |

24 * DDD

※Default Value

| Function | Selection | | Bit | Value | Application |
|--|-------------|-----------|-----|-------|------------------------|
| Auto-open door without cards at auto open zone | ※0: Disable | 1: Enable | 0 | 001 | Networking/Stand-Alone |
| Stop Alarm by door close or by push button | ※0: None | 1: Yes | 6 | 064 | Networking/Stand-Alone |

| 28 * DDD # | | | | | ※Default Value |
|--|-------------|-----------|-----|-------|------------------------|
| Function | Selection | | Bit | Value | Application |
| Can be password-free in the Card or PIN mode | ※0: Disable | 1: Enable | 5 | 032 | Networking/Stand-Alone |
| Reset the Anti-pass-back by the software | ※0: Disable | 1: Enable | 6 | 064 | Networking/Stand-Alone |
| Arming for force open | ※0: Disable | 1: Enable | 7 | 128 | Networking/Stand-Alone |

Selection= 0(none value)/ 1(1 x each value)

[e.g.] DDD value of Enable "Auto Open" + "Exit by Push Button" + "Anti-pass-back" =004+016+128=148;

As a result of that, the command will be 20 * 148 #.

Mode4/ Mode8

- **Mode 4:** 1.Card only; 2.Card and PIN (4-digit PIN) + # ; 3.Card or User address (5-digit) + Individual PIN (4-digit individual PIN) + #
- **Mode 8:** 1.Card only; 2.Card and PIN (4-digit individual PIN) + # ; 3.Card or PIN (4-digit individual PIN)

Command List

※ General instructions

| Function | Command | Description | Notes |
|--|--|--|-------|
| Entering programming mode | * PPPPPP # | PPPPPP=Master Code, default value=123456 | |
| Exiting programming mode | * # | | |
| Control mode setting | 04 * N # | N=Mode 4=Mode4 ; 8=Mode8 | |
| Master card setting | 07 * SSSSS * EEEEE # | SSSSS-EEEEEE=00000-02999; SSSSS=Starting user address; EEEEE=Ending user address | |
| Auto-open time zone setting | 08 * N * HHMMhmm * 6543217H # | N= 0(1st time zone) / 1(2nd time zone) HHMM= Starting time; hmmm= ending time (i.e.: 08301200=08:30 to 12:00) 6543217H= 7 days of week (Sat/Fri/Thu/Wed/Tue/Mon/Sun) + Holiday (F= 0: disable; 1: enable); Holidays establish by the software. | |
| Master code setting | 09 * PPPPPRRRRRR # | PPPPPP=New master code RRRRRR=Repeat the new master code | |
| Suspend / Delete tag | 10 * SSSSS * EEEEE # 10 * SSSSS 9 EEEEE # | * =Suspend 9 =Delete; SSSSS=Starting user address, EEEEE=Ending user address | |
| Active the suspended cards | 11 * SSSSS * EEEEE # | SSSSS=Starting card number, EEEEE=Ending card number | |
| Set the cards as Card mode OR PIN mode by user address | 12 * UUUUU * PPPP # | Access mode: Card or PIN ; UUUUU=user address; PPPP=4-digit pass code 0001~9999 | |
| Set the cards as Card AND PIN mode by user address | 13 * UUUUU * PPPP # | Access mode: Card and PIN ; UUUUU=user address; PPPP=4-digit pass code 0001~9999 | |
| Duress code setting | 15 * PPPP # | PPPP=4-digit pass code (default value=4321) PS. Duress code will be unavailable and become a public PIN at access mode "Card or PIN" of M6 | |
| Card number modification | 16 * UUUUU * SSSSSCCCC # | UUUUU= User address; SSSSS=5-digit site code; CCCC=5-digit card code | |
| Arming pass code setting | 17 * PPPP # | PPPP=4-digit pass code (default value=1234; disable Arming PWD=0000) PS. Arming PWD code will be unavailable and become a public PIN at access mode "Card PIN" and of M6 | |
| Door open waiting time | 18 * TTT # | TTT=Door open waiting time: 001~600=1~600 sec.; default value: 15 sec. | |
| Set the card by induction(M4/M8) | 19 * UUUUU * QQQQ # | UUUUU=User address; QQQQ=Card quantity(0001=Continuously inducting) | |
| Controller parameter setting | 24 * DDD # | Please refer to function default value for details. | |
| Controller time clock setting | 25 * YYMMDDHHmss # | YYMMDDHHmss: Year/ Month/ Day/ Hour/ Min./ Sec. | |
| Anti-pass-back (Enable user) | 26 * SSSSS * EEEEE * N # | SSSSS=Starting user address; EEEEE=Ending user address; N=0/Enable; N=1/Disable; N=2/Initial | |
| Controller control setting | 28 * DDD # | Please refer to function default value for details. | |
| Delete all tags | 29 * 29 * # | | |

※ Individual instruction set

| Function | Command | Description | Notes |
|---|------------|--|-------|
| Keyboard Lock/ Unlock | * # | Press and hold for 2 seconds to lock the keyboard, again to unlock. | |
| Exiting programming mode and enabling arming status | * * # | | |
| Node ID setting (for Reader) | 00 * NNN # | NNN=Node ID, range: 001~254 | |
| Door relay time setting | 02 * TTT # | TTT=Door relay time 000= Output constantly 001~600=1~600 sec. 601~609=0.1~0.9 sec. | |
| Alarm relay time setting | 03 * TTT # | TTT=Alarm relay time 001~600=1~600 sec. | |
| Controller additional setting | 20 * DDD # | Please refer to function default value for details. | |