



W2-A Quick reference Programming Guide	
Function description	Choose from the relevant function below and input
Enter the programming mode	<div>⌘ 888888 ⌘</div> then you can do the programming (888888 is the default factory master code)
To exit the programming mode	<div>⌘</div>
Note: that to undertake the following programming the master user must enter into the programming mode	
Change the master code	<div>0 New code ⌘ Repeat New code ⌘</div> (Code must be 6-8 digit numbers.)
Add card user	<div>1 Read Card ⌘</div> (Can add card continuously)
Delete card user	<div>2 Read Card ⌘</div> (Can delete card continuously)
To Unlock the door	
To Unlock the door	Read user card

Keypad Lockout	<div>7 1 ⌘</div>
Alarm Output	<div>7 2 ⌘</div>
LED Control	
LED disabled	<div>7 3 ⌘</div>
LED enabled	<div>7 4 ⌘</div> (Factory default setting)
Alarm output time	
To set the alarm output time (0-3 minutes) Factory default is 1 minute	<div>9 0~3 ⌘</div>
To remove the alarm	
To remove the Door Forced Open warning	<div>Read valid card or Master Code ⌘</div>
To remove the Door Open Too Long warning	Close the door or <div>Read valid card or Master Code ⌘</div>
To Unlock the door	
To Unlock the door	<div>Read user card</div> (Note that Manager Card can't be used as User Card to unlock the door.)

10.Advanced Application

10.1 W2-A operating as a Controller

In this mode the W2-A supports a Wiegand 26 bit input so an external Wiegand device with a 26 bit output can be connected to the Wiegand input terminals on the W2-A. Either an ID card reader (125 KHZ) or an IC card reader (13.56MHZ) can be connected to the W2-A. Cards are required to be added at the external reader, except where an external EM reader is used, in this case cards can be added at either reader or controller. See figure 1

10.2 W2-A operating as a Wiegand Output Reader

In this mode the W2-A supports a Wiegand 26 bit output so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 bit input. See figure 2

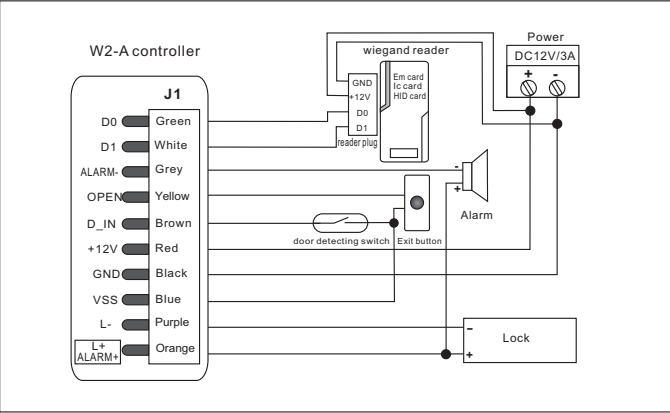


Figure 1

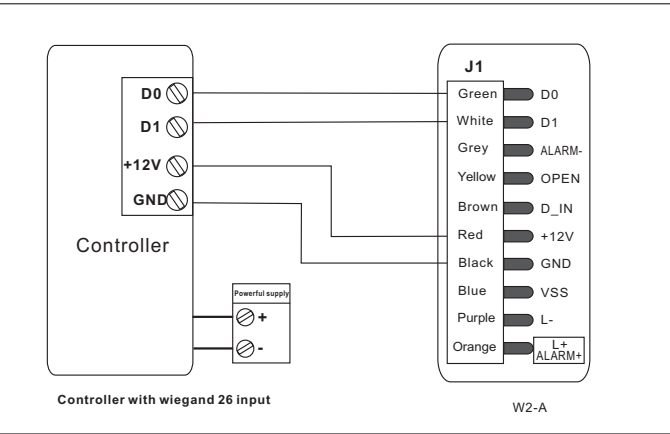


figure 2

10.3 Two W2-A units interconnected for a single door

In this mode two W2-A units are used for a single door, one for entry and the other for exit. Either device acts as the controller and reader at the same time. Users can be enrolled in either of the devices. In this mode the user capacity for one door can be up to 20000. The setting of the two W2-A units must be the same including the master code. See figure 3

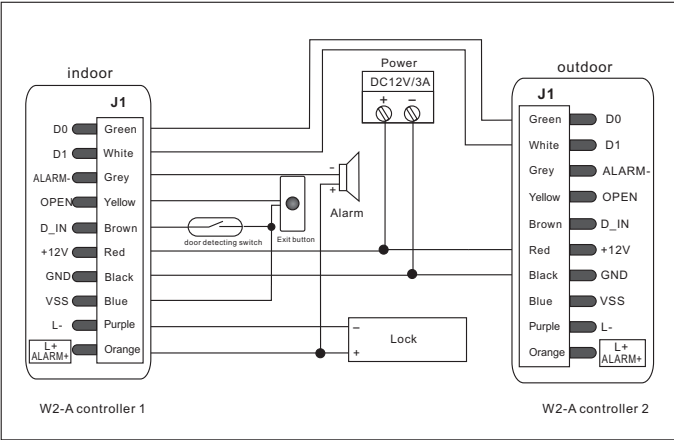


figure 3

10.4 Anti-passback function for single door (3 1 #)

The connection diagram is as figure 1. Install one Wiegand reader (or a W2-A without user information as reader) outside the door, connecting to one W2-A-Controller inside the door, which acts as the Anti-passback Master unit. Of the two devices, they build up an Anti-passback system for single door. The operation and function is as below:
4.1 Set the needed function and enroll the User Cards on the inside W2-A - Anti-passback Master unit. 4.2 With the valid user card, the user can only enter the door from the outside reader, and exit from the inside W2-A Controller. On the other hand, without entering record from the reader, the user can't exit from the controller inside, also, the user can't enter in and exit twice continuously.

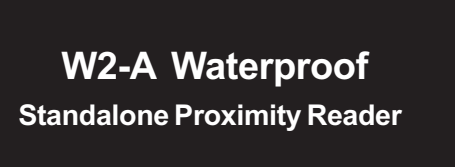
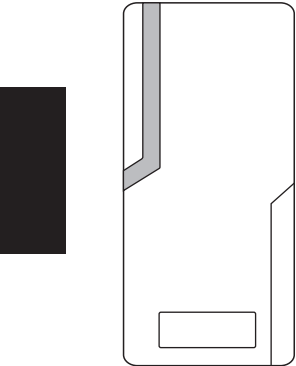
5. Anti-passback function for 2 doors

The connection diagram is as Figure 4. Door 1 with one W2-A, and Door 2 with one W2-A, set one W2-A on Door 1 as the Anti-passback Auxiliary unit (3 2 #), and set the other W2-A on Door 2 as the Anti-passback Master unit(3 1 #). Then they build up a two doors Anti-passback system, which is normally used for parking lot...etc

The operation and function is as below:

5.1 Set the needed function and enroll the User Cards from W2-A - Anti-passback Master unit on Door 2.

5.2 With the valid user card, the user can only enter in from Door 1, and exit from Door 2. On the other hand, without entering record from the Auxiliary unit, the user can't exit from the Master unit or Auxiliary unit, also, the user can't enter in and exit twice continuously.



1. Packing List

Name	Quantity	Remark
Waterproof Reader W2-A	1	
Infrared remote control	1	
Manager add card	1	
Manager delete card	1	
Short Pin	1	Used for factory default setting
User manual	1	
Self Tapping Screws	4/2	Φ3.5*27mm

Please ensure that all the above contents are correct. If any are missing, please notify the supplier of W2-A.

2. Description

The W2-A is fully waterproof stand alone Proximity access Reader, which uses advanced microprocessor, equipped with large capacity Flash memory, supports up to 10 000 cards. It can read both 125KHZ HID card and 125KHZ EM card. It is so easy to add or delete card users by using the master card; besides, with infrared remote control programmer, the user can set the reader by themselves.

The W2-A not only has the features of low power consumption, automatic selection of lock ,anti vandal alarm and exit button, but also has the protective functions against input over voltage and outputs short-circuit. The block enrollment function makes it can enroll maximum 10,000pcs HID cards or EM cards at a time within 10 minutes.

These features make the W2-A easy in operation, safe and reliable; it is an idea choice for door access.

3. Features

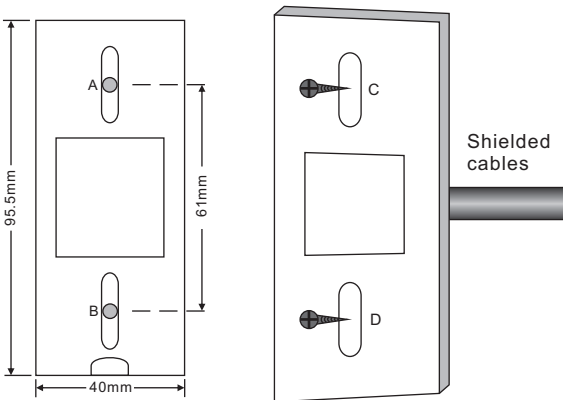
- Standalone Card Reader
- Waterproof, conform to IP68
- User capacity: 10,000
- Card interface: HID&EM 125KHz card/tag
- Remote control for programming
- With Manager cards for fast add and delete users
- Card block enrollment
- Wiegand26 input/output
- Can be used as salve reader
- 2 pcsW2-A can be interconnected
- Can be used as controller by connecting slave reader
- Anti-passback Function
- Alarm signal output, Door open detection
- LED display;
- Full of 10,000 users, recognizing speed <15ms.

4. Specifications

Supply Voltage	DC12V±10%	Environment	-25℃～60℃
User capacity	10,000	Lock output load	Max20A
Sleeping Current	<15mA	Alarm output load	Max20A
Card type	HID&EM 125KHz card/tag	Adjustable DoorRelay Time	00-99 seconds
CardReading Distance	4～8cm	Adjustable Alarm Time	0-3 minutes
Wiegand interface	Wiegand 26	Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm
Operating Temperature	-25～60℃	Manager card	Two
Operating Humidity	5%～98%	Dimensions	103 x 48 x 23mm

5. Installation

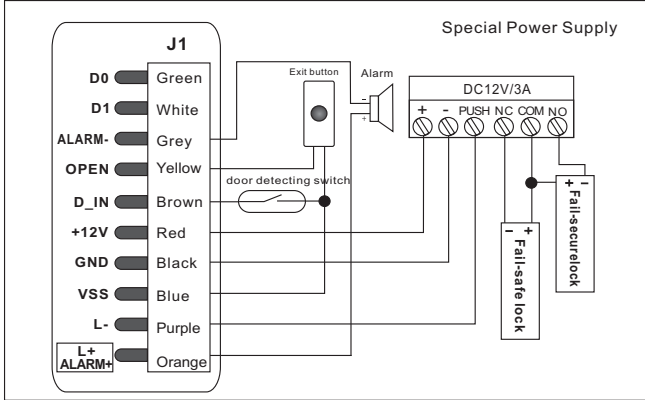
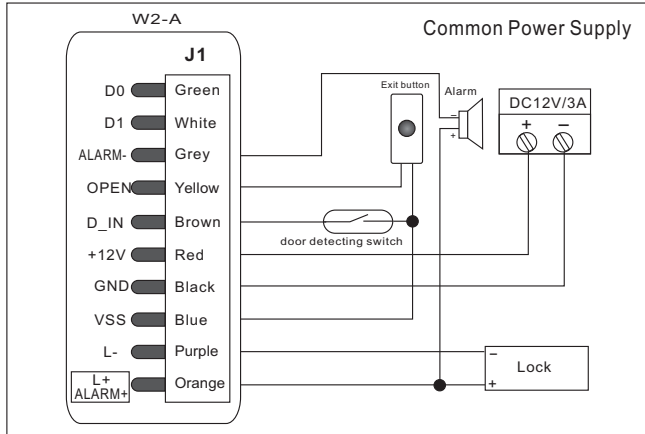
- Drill holes on the wall or prepare the cassette.
- Wire through the hole, and blanket the unused cable in case of short circuit.
- Fix the back cover firmly on the cassette or the wall.
- Attach the reader to the back cover.



6. Wiring

No	Color	Function	Description
1	Green	D0	Wiegand output, input signal wire D0
2	White	D1	Wiegand output, input signal wire D1
3	Grey	ALARM+	connecting to the negative pole of the alarm equipment
4	Yellow	OPEN	To connect to one part of Exit Button
5	Brown	D_IN	Door Contact input
6	Red	12V	(+) 12VDC Positive Regulated Power Input
7	Black	GND	(-) Negative Regulated Power Input
8	Blue	VSS	the negative pole of the controller, connect to the other part of Exit button and door contact
9	Purple	L-	Connect to the negative pole of the Lock
10	Orange	L+/Alarm+	Connect to the positive pole of the lock and alarm equipment

Connection Diagram



Note: Do not power on until all wiring has been completed

7. To Reset to Factory Default

Power off, use the supplied Contact Pin to short out the 2P socket on the main board, then power on, if successful, the beeper will beep twice, the LED shines in orange, remove the Short Pin, then read the Two Manager cards (Manager add card firstly, Manager delete card secondly), after that the LED turns in red, means reset to factory default setting successfully.

Remarks: Reset to factory default setting, the users' information enrolled is still retained. When re-set to Factory setting, the two Manager cards must be re-enrolled.

8. Sound and Light indication

Operation status	LED	Buzzer
Reset to factory default setting	Orange	Two short ring
Standby	Red shines slow	
Operation successful		Short ring
Enter into programming mode	Red shines	Short ring
Enter into setting	Orange shines	Short ring
Exist from programming mode	Red shines slow	Short ring
Operation failed		Three short ring
Open the door	Green shines	Short ring
Alarm	Red shines fast	Alarm

9. W2-A Detailed Programming Guide

9.1 User settings

There are 2 ways to add and delete users: [A - By manager card] [B - By remote control]	
A - By Manager card(The most convenient way)	
To Add user by Manager Card	[Manager add card] [Read user card] [Manager add card] Cards can be added continuously.
To Delete User by Manager Card	[Manager delete card] [Read user card] [Manager delete card] Cards can be deleted continuously.
B- By Remote control	
Enter into the programming mode firstly	
To Enter the programming mode	[*] [Manager Password] [#] 888888 is the default factory master code

Remarks: All the steps below must be done after entering into programming mode	
To change the master code	[0] [New Password] [#] [Repeat New Password] [#] The master code must be 6～8 digits number.
To add a card user (Method 1)	[1] [Read Card] [#] Card can be added continuously without exiting programming mode.
To add a card user(Method 2)	[1] [Input Card number (8 digit)] [#] The card number is the last 8 digits of the number printing on the card.
Block Enrollment- To add a series cards users (It can enroll maximum 10,000pcs cards at a time within 10 minutes.)	[8] [8 digits Card number] [#] [Card quantity] [#] Card quantity is between 1-10,000. Of the 8 digits card number, for HID card, they are the 3 digits of the facility code and 5 digits of the serial number; for EM card, they are the last 8 digits on the card.

To delete a card user. Note users can be deleted continuously without exiting programming mode	[2] [Read Card] [#] or [2] [Card number] [#]
To delete ALL users . (Note: This option will delete all users but Manager Cards. Be careful with use)	[2] [0000] [#]

9.2 Door setting

Lock Power Setting	
Fail secure (Unlocked when power on) This is the factory default, 3 seconds:	[4] [0～99] [#] 0-99 is to set the door relay time 0-99 seconds.
Fail safe (unlocked when power is off)	[5] [0～99] [#] 0-99 is to set the door relay time 0-99 seconds.
Anti-passback Settings	
• Anti-passback Disabled (Factorydefault)	[3] [0] [#]
• Anti-passback Master Mode:	[3] [1] [#]
• Anti-passback Auxiliary Machinery Mode (Note: the detailed wiring diagram and illustrate ,please refer to the “Advanced application”	[3] [2] [#]
Door open detection Door Open Too Long (DOTL) warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door and continue for 1 minute before switching off automatically. Door Forced Open warning. When used with an optional magnetic contact or built in magnetic contact of the lock, if the door is forced open, or if the door is opened after 120 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate.	
To disable door open detection. (Factory default)	[6] [0] [#]
To enable door open detection	[6] [1] [#]
Security Mode Setting	
Reader Lockout & Alarm Output options. If there are 10 invalid cards within 10 minutes, the Reader will lockout for 10 minutes or the alarm will operate for 10 minutes, depending on the option selected below.	
Normal status (No lockout or alarm)	[7] [0] [#] (Factory default setting)