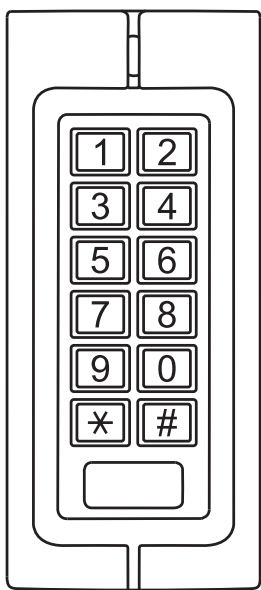
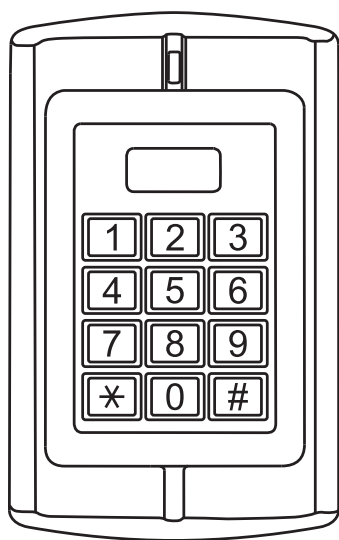


# Waterproof

## Dual-relay Access Control



W1-A



W3-A

User Manual

## 1. Packing List

Name	Quantity	Remark
Digital Keypad W1-A/W3-A	1	
User Manual	1	
Screw Driver	1	
Rubber Bungs	4	6*27mm, used for fixing
Self Tapping Screws	4	3.5*27mm, used for fixing

Please ensure that all the above contents are correct. If any are missing please notify the supplier of the W1-A/W3-A.

## 2. Description

*(W1-A&W3-A are in the same function, only different in shape.)*

The W1-A/W3-A is a two relays multifunction standalone access controller. It is suitable for mounting either indoor or outdoor in harsh environments. It is housed in a strong, sturdy and vandal proof zinc alloy electroplated structure. The electronics are fully potted so the W1-A/W3-A is waterproof and conforms to IP65.

It supports up to 1200 users in either a Card, PIN, or a Card + PIN option. The built-in card reader supports 125KHz EM frequency card, and the PIN length is 4-6 digits.

Both of the two relays on board can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines....etc)

W1-A/W3-A is an ideal choice for door access not only for small shops and domestic households but also for commercial and industrial applications such as factories, warehouses, laboratories, banks and prisons.

## 3. Features

- > Waterproof, conforms to IP65
- > Strong zinc alloy electroplated anti-vandal structure
- > Two-relay operation
- > Both of the 2 relays can be programmed for 3 modes:
  - Card, PIN, Card + PIN
- > 1200 users
- > Zone 1: up to 1100 PIN & Card holders
- > Zone 2: up to 100 PIN & Card holders

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- > PIN length: 4-6 digits; Card type: 125KHz EM card
- > Can be used as a stand alone keypad
- > Pulse mode, Toggle mode
- > Block enrollment, can enroll 1100 consecutive cards within 1 minute
- > Backlight keypad
- > Adjustable door relay output time, alarm time, door open time
- > Built in light dependent resistor (LDR) for anti tamper
- > Built in buzzer
- > Two-relay output for door opening, door status detecting, open door by button
- > Red, yellow and green LED display the working status
- > Support door bell connection(Zone 2)
- > 12-24V DC/12-18V AC power input
- > Two-year warranty

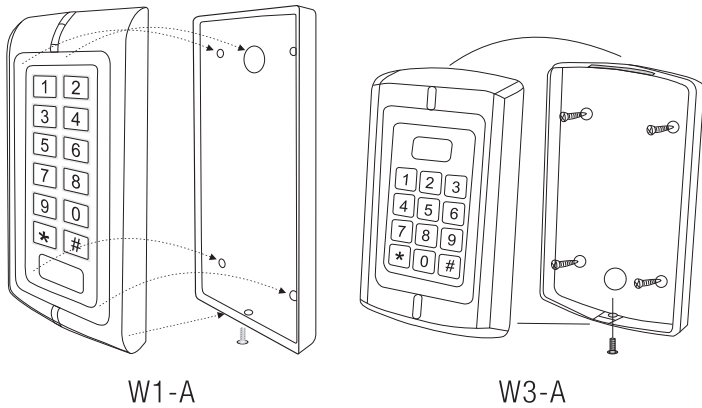
## 4. Specifications

Operating Voltage	12-24V DC/12-18V AC
User Capacity	1200
Keypad	12 keys, 2 x 6 digits (W1-A)
	12 keys, 3 x 4 digits (W3-A)
Card Type	EM card
Card Reading Distance	3-6 cm
PIN length	4-6 digits
Active Current	60mA
Idle Current	25 ± 5 mA
Lock Output Load	Max 2A
Alarm Output Load	Max 20A
Operating Temperature	-40 °C -60 °C
Operating Humidity	5% - 95% RH
Environment	Conforms to IP65
Adjustable Door Relay time	1-99 seconds
Adjustable Alarm Time	0- 3 minutes
Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm
Dimensions	L135xW58xH26 mm (W1-A)
	L128xW82xH28 mm (W3-A)
Net Weight	650 g
Gross Weight	800 g

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## 5. Installation

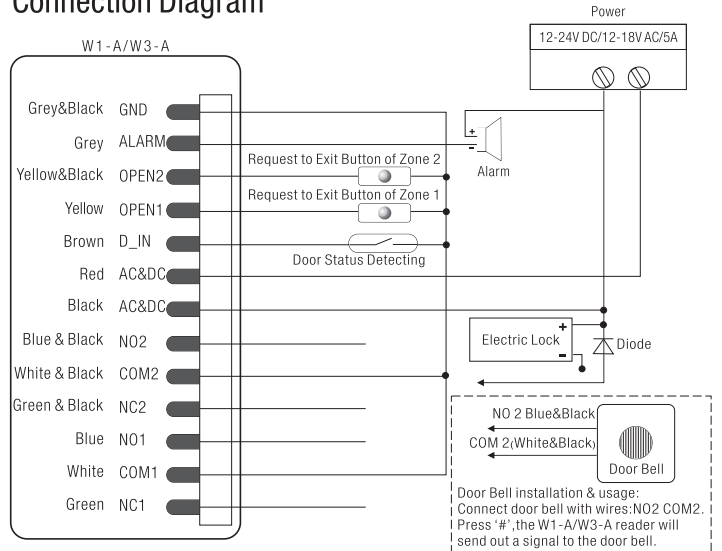
- > Remove the back cover from the keypad using the supplied security screwdriver
- > Drill four holes on the wall for the screws and 1 hole for the cable
- > Fix the back cover firmly on the wall with 4 flat head screws
- > Thread the cable through the cable hole
- > Attach the keypad to the back cover



## 6. Wiring

Colour	Function	Description
Grey & Black	GND	Negative Pole
Grey	ALARM -	Alarm Negative
Yellow & Black	OPEN2	Request to Exit Button of Zone 2
Yellow	OPEN1	Request to Exit Button of Zone 1
Brown	D_IN	Door Status Detecting
Red	AC&DC	12-24V DC/12-18V AC Power Input
Black	AC&DC	12-24V DC/12-18V AC Power Input
Blue & Black	NO2	
White & Black	COM2	
Green & Black	NC2	
Blue	NO1	
White	COM1	
Green	NC1	

## Connection Diagram



### Remarks:

The Zone 2, it can be used to operate the door bell when no need to operate a second door. The wiring is connecting the door bell to NO2 and COM2. Press #, the reader will send out a switching signal to the door bell, as long as you press the "#", the door bell will continuous operate, it will stop until you release the "#"

Connect the negative pole of the lock to NC is for Fail safe lock.

Connect the negative pole of the lock to NO is for Fail secure lock.

## 7. Relay operation (Pulse mode and Toggle mode)

Both of the two relays on board can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines...etc)

Everytime a valid card/ tag read or valid PIN input in Pulse Mode, the relay will operate, for the pre-set relay pulse time.

Everytime a valid card/ tag read or valid PIN input in Toggle Mode, the relay changes state, which will not turn back until read card or input PIN again.

## 8. Reset to Factory Default

To reset to factory default, power off, press , hold it and power on, release it until hear three beeps(two short, one long), means reset to factory default successfully.

Remarks: Reset to factory default, the user's information is still retained.

## 9. Anti Tamper Alarm

The W1 -A/W3-A uses a LDR (light dependent resistor) as an anti tamper alarm. If the keypad is removed from the cover then the tamper alarm will operate.

## 10. Sound and Light indication

Operation Status	Red Light	Green Light	Blue Light	Buzzer
Zone1 unlock	-	Bright	-	Short Ring
Zone2 unlock	-	-	Bright	Short Ring
Power on	Bright	-	-	Long Ring
Stand by	Shines slowly	-	-	-
Press keypad	-	-	-	Short Ring
Operation successful	-	-	Bright	Long Ring
Operation failed	-	-	-	3 Short Rings
Enter into programming mode	Bright	-	-	Long Ring
In the programming mode	Bright	Bright	-	-
Exit from the programming mode	Shines slowly	-	-	Long Ring
Alarm	Shines quickly	-	-	Alarm

## 11. W1 –A/W3 –A Detailed Programming Guide

### 11.1 User Settings

To enter the programming mode	<input type="button" value="*"/> Master code <input type="button" value="#"/> 888888 is the default factory master code
To exit from the programming mode	<input type="button" value="*"/>
Note: All the steps below must be done after entering into the programming mode	

To change the master code	<p>0 New code # New code #</p> <p>The master code is any 6 digits</p>
<b>Setting the working mode:</b>	
Set valid <b>Card or PIN</b> users	<p>3 1 2 #, Zone 1</p> <p>3 2 2 #, Zone 2</p> <p>Entry is by either <b>card or PIN (Factory default setting)</b></p>
Set valid <b>Card and PIN</b> users	<p>3 1 1 #, Zone 1</p> <p>3 2 1 #, Zone 2</p> <p>Entry is by <b>card and PIN</b> together</p>
<p><b>Note:</b> When adding users, if the card or PIN user has been enrolled already, you can not add it again on the same zone, or the device will give a bleep as error. Same PIN for both Zone 1 and Zone 2 is not valid, if so, the PIN will be only valid for Zone 1.</p>	
<b>Factory default setting: Card or PIN mode</b>	
To set user for Zone 1 ( 3 1 2 # )	
To add a <b>PIN</b> users	<p>1 User ID number # PIN #</p> <p>The ID number is any number among 1-1100. The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved. Users can be added continuously without exiting programming mode as follows:</p> <p>1 User ID No 1 # PIN # User ID No 2 # PIN #</p>
To delete a <b>PIN</b> user	<p>2 User ID number #</p> <p>Users can be deleted continuously without exiting programming mode</p>
To change the PIN of a PIN user (Note: This step must be done out of programming mode)	<p>* User ID number # Old PIN # New PIN # New PIN #</p>
To add a <b>card</b> user (Method 1) This is an easy way to enter cards with auto-generated ID numbers The ID number will start from 1 if no user has been programmed	<p>1 Read Card #</p> <p>Cards can be added continuously without exiting programming mode</p>

<p>To add a <b>card</b> user (Method 2) This is the alternative way to enter cards using user ID allocation. In this method a user ID is allocated to a card. Only one user ID can be allocated to a single card</p>	<p>1 [User ID number] # [Card] # The ID number can be any number between 1-1100</p>
<p>To add a <b>series cards</b> users-Block Enrollment The card number must be consecutive (This operation is only for Zone 1)</p>	<p>5 [User ID number] # [8 digits Card number] # [Card quantity] # Card quantity is between 1-1100 Of the 8 digits card number, it is the last 8 digits onthe card Maximum 1100 cards can be enrolled at a stretch within 1 minute</p>
<p>To delete <b>card</b> users by cards Note: Users can be deleted continuously without exiting programming mode</p>	<p>2 [Read Card] # The device can automatically identify the card of Zone 1 or Zone 2</p>
<p>To delete <b>Card</b> users by user ID This option can be used when a user has lost their card</p>	<p>2 [User ID] #</p>
<p>To <b>delete Card</b> users by card number</p>	<p>9 [Input 8 digits card number] # Cards can be deleted continuously without exiting from programming mode</p>
<p>To set user for Zone 2 ( [3] [2] [2] # )</p>	
<p>To set <b>PIN</b> user for Zone 2 is the same as Zone 1, only the ID number is 1101-1200 for Zone 2. To set <b>Card</b> user for Zone 2 is the same as Zone 1, with the exception of adding Card users with auto-generated ID numbers (Method 1) as below</p>	
<p>To add <b>Card</b> Users (Method 1) Auto-generated ID numbers</p>	<p>5 [Read card] # Card can be added continuously without exiting programming mode</p>

### Card and PIN Mode

<p>To set user for Zone 1 ( [3] [1] [1] # )</p>	
<p>To add a card and PIN user (The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved)</p>	<p>Add the card as for a card user Press [*] to exit from the programming mode Then allocate the card a PIN as follows: [*] [Read card] [1234 #] [PIN #] [PIN #]</p>

To change a <b>PIN</b> in card and PIN mode (Method 1) Note that this is done outside programming mode so the user can undertake this themselves	* <input type="button" value="Read card"/> <input type="button" value="Old PIN #"/> <input type="button" value="New PIN #"/> <input type="button" value="New PIN #"/>
To change a <b>PIN</b> in card and PIN mode (Method 2) Note that this is done outside programming mode so the user can undertake this themselves	* <input type="button" value="User ID number #"/> <input type="button" value="Old PIN #"/> <input type="button" value="New PIN #"/> <input type="button" value="New PIN #"/>
To delete a <b>Card and PIN</b> user just delete the card	<input type="button" value="2"/> <input type="button" value="Read card"/> <input type="button" value="#"/> or <input type="button" value="2"/> <input type="button" value="User ID"/> <input type="button" value="#"/>
To set users for Zone 2 ( <input type="button" value="3"/> <input type="button" value="2"/> <input type="button" value="1"/> <input type="button" value="#"/> )The operation is the same as Zone 1	
<b>Card only Mode</b> (in this mode, users can only be valid by card)	
To set <b>Card</b> user only	<input type="button" value="3"/> <input type="button" value="1"/> <input type="button" value="0"/> <input type="button" value="#"/> , Zone 1 <input type="button" value="3"/> <input type="button" value="2"/> <input type="button" value="0"/> <input type="button" value="#"/> , Zone 2 Entry is by <b>Card only</b>

To delete <b>ALL</b> users	
Note: This is a <b>dangerous</b> option, so use with care	Delete all users of Zone 1: <input type="button" value="2"/> <input type="button" value="0000"/> <input type="button" value="#"/> Delete all users of Zone 2: <input type="button" value="9"/> <input type="button" value="0000"/> <input type="button" value="#"/>

To unlock the door (or change relay state)	
For a <b>PIN</b> user	Enter the <input type="button" value="PIN"/> then press <input type="button" value="#"/>
For a <b>card</b> User	<input type="button" value="Read card"/>
For a <b>card and PIN</b> user	<input type="button" value="Read card"/> then enter <input type="button" value="PIN #"/>

## 11.2 Relay Setting (Pulse mode, Toggle mode)

### Pulse mode (Factory default)

Pulse mode - Door relay time setting	For Zone 1: <input type="button" value="4"/> <input type="button" value="1"/> <input type="button" value="1-99"/> <input type="button" value="#"/> For Zone 2: <input type="button" value="4"/> <input type="button" value="2"/> <input type="button" value="1-99"/> <input type="button" value="#"/> The door relay time is between 1-99 seconds, the factory default setting is 5 seconds
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## Toggle mode

Toggle mode	For Zone 1: 4 1 0 # For Zone 2: 4 2 0 #
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## 11.3 Door Detection, Alarm, Acoustic Signal, Door Bell Settings

### 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. The Alarm Output time is adjustable between 1–3 minutes with the default being 1 minutes.

To disable door open detection ( Factory default setting )	6 0 #
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To enable door open detection	For Zone 1: 6 1 # For Zone 2: 6 2 # You can enable the door open detection of only one Zone
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### Keypad lockout & alarm output options

If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period either the keypad will lockout for 10 minutes or the alarm will operate , depending on the option selected below

Normal status: No keypad lockout or alarm	7 0 # (Factory default setting)
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Keypad Lockout	7 0 #
----------------	-------

Alarm output	7 2 # (Alarm output time:1 minute)
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### Alarm Output time

To set the alarm output time(1~3 minutes)Factory default is 1 minute	8 1~3 #
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### Keypad Tone

The keypad tone can be set on or off. When on, the device will give the voice when press the keys; when off, the device will be in silent



To enable the keypad tone	<input type="text" value="8"/> <input type="text" value="6"/> <input type="text" value="#"/> (Factory default setting)
To disable keypad tone	<input type="text" value="8"/> <input type="text" value="7"/> <input type="text" value="#"/>
<b>Change Zone 2 to Door Bell</b> When no need to operate a second door, Zone 2 can be set to operate the Door Bell. The wiring is connecting the door bell to COM2 and NO2. Press #, the keypad will send the signal to the door bell	
Zone 2	<input type="text" value="8"/> <input type="text" value="8"/> <input type="text" value="#"/> ( Factory default )
Doorbell	<input type="text" value="8"/> <input type="text" value="9"/> <input type="text" value="#"/>
<b>To remove the alarm</b>	
To remove the door forced open warning	<input type="text" value="Read valid card"/> or <input type="text" value="Master code #"/>
To remove the door open too long warning	Close the door or <input type="text" value="Read valid card"/> or <input type="text" value="Master code #"/>

### 11.4 Anti-duress

1. When enroll same card in Zone 1 and Zone 2, this card will be anti-duress card. Please notice, you can not set anti-duress PIN.
2. When under forcing, use this card. Both doors are opened. In the meantime, the external alarm alarms.
3. You can set max 100 anti-duress cards ( The users of Zone 2).

## W1–A/W3–A Quick Reference Programming Guide

To enter the programming mode	* <input type="text" value="Master code"/> <input type="text" value="#"/> 888888 is the default factory master code
To exit from the programming mode	* <input type="text"/>
<i>Note that to undertake the following programming the master user must be logged in</i>	
To add a PIN user  The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved	For Zone1: <input type="text" value="1"/> <input type="text" value="User ID Number"/> <input type="text" value="#"/> <input type="text" value="PIN"/> <input type="text" value="#"/> For Zone2: <input type="text" value="1"/> <input type="text" value="User ID Number"/> <input type="text" value="#"/> <input type="text" value="PIN"/> <input type="text" value="#"/> The ID number is any number between 1-1100 for Zone1 and any number between 1101-1200 for Zone 2 Users can be added continuously without exiting programming mode
To add a card	For Zone 1: <input type="text" value="1"/> <input type="text" value="Read Card"/> <input type="text" value="#"/> For Zone 2: <input type="text" value="5"/> <input type="text" value="Read Card"/> <input type="text" value="#"/> Cards can be added continuously without exiting programming mode
To delete a PIN or a card user	<input type="text" value="2"/> <input type="text" value="User ID number"/> <input type="text" value="#"/> for a PIN user <input type="text" value="2"/> <input type="text" value="Read Card"/> <input type="text" value="#"/> for a card user Users can be deleted continuously without exiting programming mode
To Unlock the door for Zone 1 or Zone 2	
To Unlock the door for a PIN user	Enter the <input type="text" value="PIN"/> then press <input type="text" value="#"/>
To Unlock the door for a card user	Present the card
To change the master code	<input type="text" value="0"/> <input type="text" value="New code"/> <input type="text" value="#"/> <input type="text" value="New code"/> <input type="text" value="#"/> The master code is any 6 digits