

W3-M Quick Reference Programming Guide

To enter the programming mode	[*] [Master code] [#] 888888 is the default factory master code
To exit from the programming mode	[*]
Note that to undertake the following programming the master user must be logged in	
To change the master code	[0] [New code] [#] [New code] [#] The master code is any 6~8 digits
To add a PIN user	[1] [User ID number] [#] [PIN] [#] The ID number is any number between 1 ~ 1500. 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
To add a card user	[1] [Read Card] [#] Cards can be added continuously without exiting from programming mode
To delete a PIN or a card user	[2] [User ID number] [#] for a PIN user or [2] [Read Card] [#] for a card user Users can be deleted continuously without exiting from programming mode
To Unlock the door	
To unlock the door for a PIN user	Enter the [PIN] then press [#]
To unlock the door for a card user	Present the card

To change a PIN in card and PIN mode (Method 1) Note that this is done out of programming mode so the user can undertake this themselves	[*] [Read Card] [Old PIN #] [New PIN #] [New PIN #]
To change a PIN in card and PIN mode (Method 2) Note that this is done out of programming mode so the user can undertake this themselves	[*] [User ID number #] [Old PIN #] [New PIN #] [New PIN #]
To delete a Card and PIN user just delete the card by ID number	[2] [User ID number] [#]
To add and delete card user in card only mode ([3] [0] [#])	
To Add and Delete a card user	The operating is the same as adding and deleting a card user in [3] [2] [#]
To delete All users	
To delete ALL users . Note that this is a dangerous option so use with care	[2] [0000] [#]

To unlock the door	
For a PIN user	Enter the [PIN] then press [#]
For a card user	[Read card]
For a card and PIN user	[Read card] then enter [PIN] #

11.2 Relay Setting (Pulse mode,Toggle mode)

Pulse mode(Factory default)

Pulse mode (Door relay time setting)	[4] [1] [1~99] [#] The door relay time is between 1~99 seconds, the factory default setting is 5 seconds.
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Toggle mode

Toggle mode	[4] [1] [0] [#]
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11.3 Alarm,Door Open Detection, Duress user Settings

Alarm output time	
To set the alarm output time (0~3 minutes). Factory default is 1 minute	[5] [0~3] [#]
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 being 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 0~3 minutes with the default being 1 minute.	
To disable door open detection. (Factory default setting)	[6] [0] [#]
To enable door open detection	[6] [1] [#]
Keypad Lockout & Alarm Output options. If there are 10 invalid cards or 10 incorrect PIN numbers in a 10 minute period, the keypad will lockout for 10 minutes or the alarm will operate for 10 minutes, depending on the option selected below.	
Normal status: No keypad lockout or alarm(Factory default setting)	[7] [0] [#]
Keypad Lockout	[7] [1] [#]
Alarm Output	[7] [2] [#]
To remove the alarm	
To reset the Door Forced Open warning	[Read valid card] or [Master Code #]
To reset the Door Open Too Long warning	Close the door or [Read valid card] or [Master Code #]

11.4 Duress User Settings

There are 10 groups Duress PIN/card available. When input Duress PIN/card, the door will open, at the same time, the output alarm operates.	
To set Duress PIN user	
To add a PIN user	[8] [User ID number] [#] [PIN] [#]
To delete a PIN user	The operating is the same as deleting common PIN user
To set Duress card user	
To add a card user(Method 1) User ID number auto generation.	[8] [Read card] [#] (Cards can be added continuously)
To add a card user (Method 2) User ID number allocation.	[8] [User ID number #] [card] [#] (The ID number is between 1501 ~ 1510.)
To delete a card user	The operating is the same as deleting common card user
Note: ① User ID number is between 1501 ~ 1510 ② Duress PIN/card must be unique, should be distinguished from common PIN and card (When the Duress PIN/card is the same with common PIN and card, they will become invalid in Duress, and worked as common user function)	

12. Wiegand Mode Setting

To set Wiegand 26 format:	[9] [0] [#] (Default setting: Wiegand 26)
To set Wiegand 34 format:	[9] [1] [#]

13 Interconnecting Two Devices

13.1 W3-M operating as a Wiegand Output Reader

In this mode the W3-M supports a Wiegand 26 bits and 34 bits output so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 or 34 bits input. See figure 1.

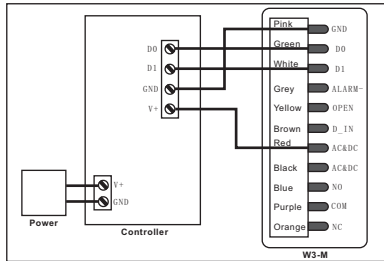


figure 1

Transmission Format:

● 1: Keypad Transmission

The Reader will transmit the PIN data when it receives the last key (#) press after PIN code.

Format: PIN Code

(PIN code is any 4~6 digits between 0000~999999)

For example:

1)Wiegand 26output:

PIN code: 5678

Press 5678 #, then the output format will be: 00005678

2)Wiegand 34output:

PIN code: 5678

Press 5678 #, then the output format will be: 0000005678

● 2: Proximity Card Transmission

The Reader will transmit the card data when it reads the Card.

Format: Card Numbe

(**Note:** No matter the card or PIN is valid or invalid, the data will be transmitted)

13.2 W3-M operating as a Controller

In this mode the W3-M supports a Wiegand 26/34 bit input so an external Wiegand device with a 26/34 bit output can be connected to the Wiegand input terminals on the W3-M. Either an ID card reader (125 KHz) or an IC card reader (13.56MHz) can be connected to the W3-M. Cards are required to be added at the external reader, except where an external Mifare reader is used, in this case cards can be added at either reader or controller.

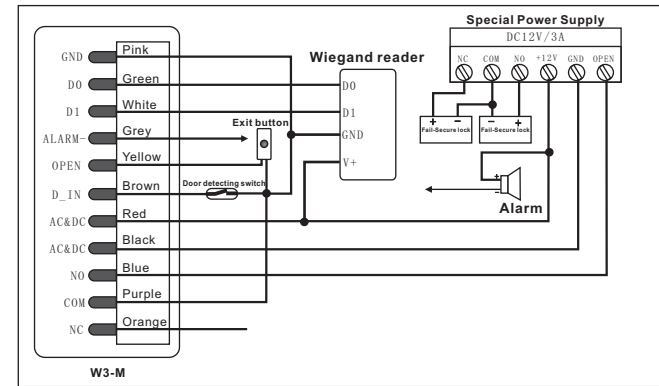
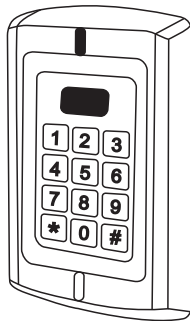


figure 2



W3-M Waterproof
Keypad/Reader/Controller

1. Packing list

Name	Quantity	Remark
Digital Keypad W3-M	1	
User Manual	1	
Screw driver	1	
Rubber bungs	4	6*27mm, used for fixing
Self Tapping Screws	4	4*28mm, used for fixing
Diode	1	1N4004

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

2. Description

The W3-M is single door multifunction access controller or a Wiegand output keypad or card reader. 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 case. The electronics are fully potted so the W3-M is waterproof and conforms to IP68.

The W3-M supports up to 1500 users in either a Card, or 4~6digits PIN, or a Card + PIN option and additional 10 groups Duress PIN/Card. The inbuilt card reader supports Mifare, 13.56MHz frequency card/tag. The W3-M has many extra features including Duress PIN/card, Wiegand 26/34 bits interface, and backlit keypad...etc. These features make the W3-M 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 IP68
- Strong zinc alloy electroplated anti-vandal case
- Full programming from the keypad
- 1500 users, supports Card, PIN, Card + PIN
- Can be used as standalone keypad only
- PIN length:4~6 digits
- Card interface: Mifare 13.56MHz
- 10 groups Duress PIN/Card
- Wiegand 26/34 input & output
- Programmable one relay output
- Backlight keypad
- Pulse mode, Toggle mode
- Adjustable door output time, alarm time, door open time
- Very low power consumption (30mA)

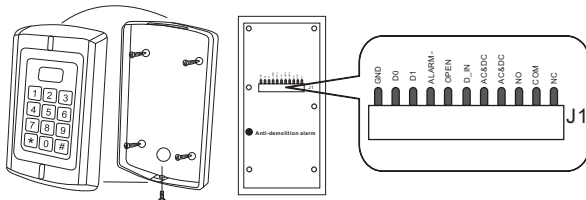
- Fast operating speed, <0.1S with 1500 users
- Lock and alarm output current short circuit protection
- Built in light dependent resistor (LDR) for anti tamper
- Built in buzzer
- Red, Yellow and Green LEDs display the working status
- 12~24V DC or 9~18V AC
- Two- year warranty

4. Specifications

Operating Voltage	12~24V DC or 9~18V AC	Operating Temperature	-20~60℃
User Capacity	1500	Operating Humidity	10%~ 90% RH
Duress User Capacity	10	Adjustable Door Relay time	1~99 seconds
Keypad	12 keys:3 x 4 digits	Wiegand Interface	Wiegand 26/34 bits
Card Type	Mifare 13.56MHz	Wiring Connections	Electric Lock, Exit Button, DOTL, External Alarm
Card Reading Distance	3~6 cm	Dimensions	L128 x W82 x H28 mm
Idle Current	25±5mA	Net Weight	600 g
Lock Output Load	Max 2A	Gross Weight	700 g
Alarm Output Load	Max 20A		

5. Installation

- Remove the back cover from the keypad using the supplied security screwdriver
- Drill 4 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.



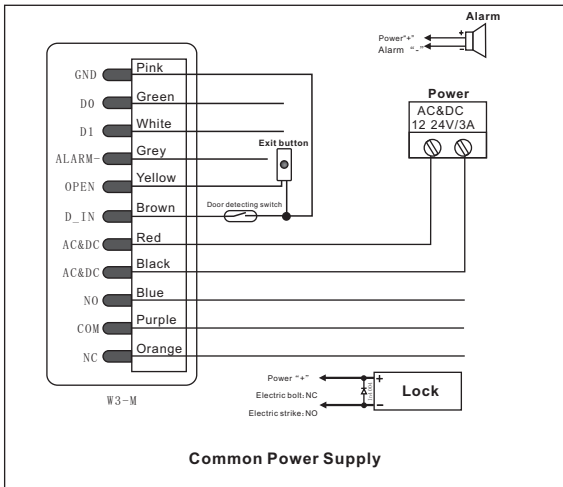
W3-M

PCB connect diagram

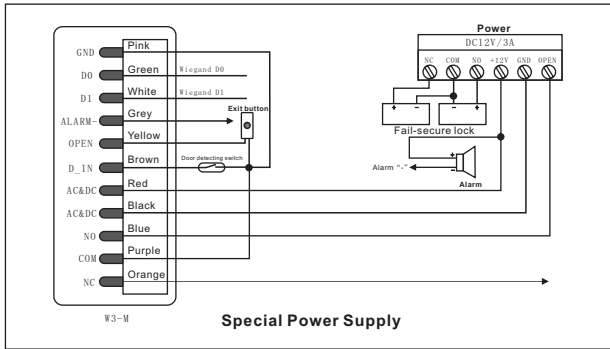
6. Wiring

Colour	Function	Description
Green	D0	Wiegand Output D0
White	D1	Wiegand Output D1
Grey	Alarm -	Alarm Negative
Yellow	OPEN	Request to Exit Button
Brown	D-IN	Door Contact
Red	12~24V DC or 9~18V AC	12~24V DC or 9~18V AC Power Input
Black	12~24V DC or 9~18V AC	12~24V DC or 9~18V AC Power Input
Blue	NO	Relay NO
Purple	COM	Relay COM
Orange	NC	Relay NC
Pink	GND	W3-M Negative

Connection Diagram



Common Power Supply



Notes:

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)

The relay on board can operate in Pulse Mode (suitable for access control) or Toggle Mode (suitable for arming/disarming alarms, switching lights, machines....etc)

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

Every time a valid tag/card or Pin is read/input in Toggle Mode, the relay changes state, which will not turn back until read card or input pin again.

8. To Reset to Factory Default

To reset to factory default, power off, press **[*]**, hold it and power on, release it after hear two beeps, means reset to factory default successfully.

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

9. Anti Tamper Alarm

The W3-M 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	Buzzer
Power on	-	Bright	Short Ring
Stand by	Sparkle	-	-
Press keypad	-	-	Short Ring
Operation successful	-	Bright	Short Ring
Operation failed	-	-	3 Short Ring
Enter into programming mode	Bright	-	Short Ring
In the programming mode	-	-	-
Exit from the programming mode	Bright	Bright	Short Ring
Open the door	-	Bright	Short Ring
Alarm	Flashing	-	Alarm

11. W3-M Detailed Programming Guide

11.1 User Settings

To enter the programming mode	[*] [Master code] [#] 888888 is the default factory master code
To exit from the programming mode	[#]
Note that to undertake the following programming the master user must be logged in	
To change the master code	[0] [New code] [#] [New code] [#] The master code is any 6~8 digits.
Setting the working mode:	
To set valid card only users	[3] [0] [#] Entry is by Card only
To set valid card and PIN users	[3] [1] [#] Entry is by Card and PIN together
To set valid card or PIN users (factory default)	[3] [2] [#] Entry is by either Card or PIN (default)
To add and delete users in either card or PIN mode ([3][2][#]) (Default setting)	

To add a PIN users	[1] [User ID number] [#] [PIN] [#] The ID number is any number between 1 ~ 1500. 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 from programming mode as follows: [1] [User ID No 1] [#] [PIN] [#] [User ID No 2] [#] [PIN] [#]
To Delete a PIN user	[2] [User ID number] [#] Users can be deleted continuously without exiting programming mode
To change the PIN of a PIN user (This step must be done out of programming mode)	[*] [User ID number] [#] [Old PIN] [#] [New PIN] [#] [New PIN] [#]
To add a card user (Method 1) This is a fast way to enter cards using ID number auto generation.	[1] [Read Card] [#] Cards can be added continuously without exiting programming mode
To add a card user (Method 2) This is the optional 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.	[1] [User ID number] [#] [Card] [#] (The ID number is any number between 1~1500)
To delete card user by card	[2] [Read Card] [#]
Note Users can be deleted continuously without exiting from programming mode.	
To delete a card user by user ID. This option can be used when a user has lost their card	[2] [User ID number] [#]
To add and delete users in card and PIN mode ([3][7][#])	
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.)	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] [#]