

### 1. Introduction

It is a waterproof OSDP keypad reader, and also with Wiegand output, can read 125KHz EM card, HID card & 13.56MHz Mifare cards at the same time.

#### Features:

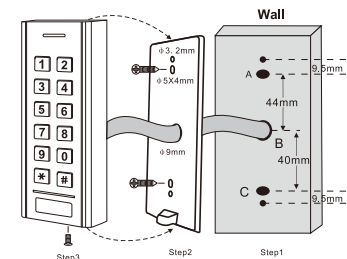
- > Waterproof, conforms to IP66
- > OSDP+ Wiegand, AES128 encryption
- > Card Type: 125KHz HID, EM & 13.56MHz Mifare
- > Programmable Wiegand output
  - EM card: Wiegand 26~44 bits output (default: 26bits)
  - Mifare card: Wiegand 26~44, 56, 58bits output (default: 34bits)
  - HID card: Wiegand 26~37 bits output
- > PIN output: 4 bits, 8 bits or virtual card number

#### Specifications:

Operation Voltage	12~18V DC
Standby Current	≤50mA
Frequency	125KHz & 13.56MHz
Card Type	EM & HID & MIFARE
Read Range	2~4 cm
Wiegand Output Format	EM card: Wiegand 26~44 bits output (default: 26bits) Mifare card: Wiegand 26~44, 56, 58bits output (default: 34bits) HID card: Wiegand 26~37 bits output
Keypad Transmission Format	4 bits (factory default) 8 bits or virtual card number can be set
Operating Temperature	-40°C~60°C
Operating Humidity	0% ~ 98% RH
Color	Black
Index of Protection	IP66
Dimension	120x75x20mm(Wide) 120x50x20(Slim)
Net Weight	200g (Wide) / 150g (Slim)
Shipping Weight	250g (Wide) / 200g (Slim)

### 2. Installation

- Drill 2 holes (A, C) on the wall for the screws and one hole (B) for the cable
- Knock the rubber bungs to the holes (A, C)
- Fix the back cover on the wall with 2 screws
- Thread the cable through the cable hole (B)
- Attach the unit to the back cover

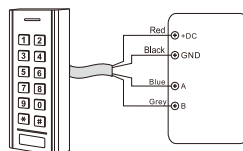


#### Wiring

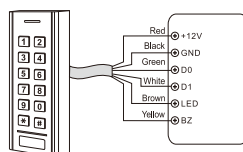
Color	Function	Notes
Red	Power +	+12V
Black	GND	Ground
Green	D0	Data 0
White	D1	Data 1
Brown	LED	Green LED Light Control
Yellow	Buzzer	Buzzer Control
Blue	A	RS485A
Gray	B	RS485B

### Connection Diagram

#### Connect with OSDP Controller



#### Connect with Wiegand Controller



### 3. Programming

Note: When enter program mode, need press \* for 5 seconds, then press Master code # (Factory default master code: 123456)

#### Set Master Code (6 digits)

The Master Code is used to prevent unauthorized access to the system, we highly recommend immediately updating it and recording the New Master Code.

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) # (factory default: 123456)
2. Update Master Code	0 (New Master Code) # (Repeat New Master Code) #
3. Exit Program Mode	*

#### Set Wiegand Format for EM Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Set Wiegand Format	1 (26~44) # (Factory default is 26bits)
3. Exit Program Mode	*

#### Set Wiegand Format for HID Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Output Format Setting	2 0 # (Auto output, factory default) 2 (26~37) #
3. Exit Program Mode	*

#### Set Wiegand Format for MIFARE Cards

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Output Format Setting	3 0 # (Auto output) 3 (26~44, 56, 58) # (Factory default is 34 bits)
3. Exit Program Mode	*

#### Set PIN Output Format

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Virtual Card Number Output	4 0 #
PIN output	4 4 # (factory default)
PIN output	4 8 #
3. Exit Program Mode	*

#### Set Keypad Backlit

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Keypad Backlit	5 1 # (factory default) Always ON
OR	
2. Keypad Backlit	5 2 # Automatic OFF after 20s
3. Exit Program Mode	*

#### Baud Rate Settings (Factory default: 9600)

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
Setting values:	6 (4800, 9600, 14400, 19200, 38400, 56000, 57600, 115200, 128000) #
3. Exit Program Mode	*

Note: The baud rate of all readers under the same controller should be set to the same with the controller's baud rate, otherwise the connection will fail.

#### OSDP Address Settings (Factory default: 0)

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
Setting the address	7 (0-126) #
3. Exit Program Mode	*

Note: The addresses of all readers under the same controller should be set to be different, otherwise the two readers will conflict

#### Reset to Factory Default (two methods)

##### Method 1

Programming Step	Keystroke Combination
1. Enter Program Mode	*(Master Code) #
2. Reset to Factory Default	5 0 #
3. Exit Program Mode	*

##### Method 2 (This way is suitable for users forget the master code):

Power off, connect Yellow wire and GND wire, then power on, wait for 5 seconds, there will be a long beep, means reset to factory default successfully, then disconnect the Yellow wire and GND wire.

### 4. Indicator light status

Operation Status	Indicator light color	Buzzer
Standby status	OSDP Controller decides	
Correct Card	OSDP Controller decides	beep-
Error Card	OSDP Controller decides	beep-

### 5. Packing List

Name	Quantity
Reader	1
Manual	1
Self Tapping Screws	2(Φ4*25mm)
USB Serial Tools	2
Rubber plug	2

## **FCC STATEMENT :**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

**Warning:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

## **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.