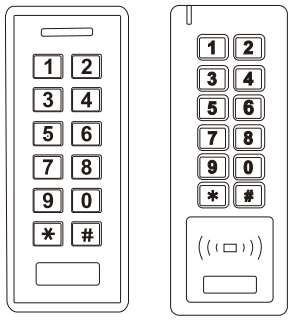
Keypad Reader



SK2-RX SK5-RX

User Manual

1. Introduction

The SK2-RX/SK5-RX is a Wiegand output keypad, with integrated proximity reader. It can read 125KHz EM & HID Cards and 13.56MHz Mifare Card. Because of waterproof, it can be mounted either indoor or outdoor in harsh environments.

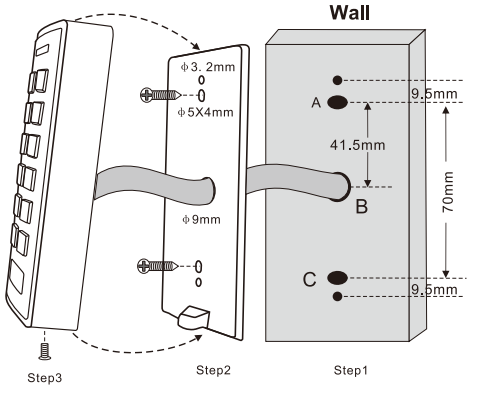
Features:
Waterproof, conforms to IP66
Programmable Wiegand output: 26~37 bits
Programmable Keypad Transmission: 4bits, 8bits or virtual card number format
Card type: HID Card, EM Card & Mifare Card
Reading range: 3~8cm
External LED Control & External Buzzer Control

Specification:

Model	SK2-RX	SK5-RX
Frequency	125KHz & 13.56MHz	
Card Type	125KHz -EM & HID Cards/Fobs 13.56MHz - Mifare Cards/Fobs(ISO 14443A Compatible)	
Read Range	3~6 cm	
Standby Current	≤35mA	
Operating Voltage	9~18V DC	
Wiegand Output Format	Wiegand 26~37 bits output (default: 26 bits)	
Keypad Transmission Format	4bits(factory default) 8bits or virtual card number format can be set	
Operating Temperature	-40℃~60℃	
Operating Humidity	0% RH ~ 95% RH	
Physical	ABS	Zinc-Alloy
Color	Black/Ivory	Silver
Index of Protection	IP66	
Dimension	L122 x W50 x D21 mm	L148 x W56 x D22.5 mm
Net Weight	155g	275g
Shipment Weight	210g	330g

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 though the cable hole (B)
- Attach the unit to the back cover



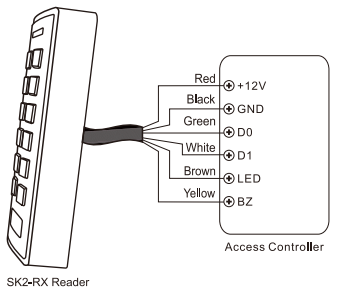
Wiring

Color	Function	Notes
Red	Power +	9~24V/12~24V DC Power Input
Black	GND	Ground
Green	D0	Wiegand Data 0 Output
White	D1	Wiegand Data 1 Output
Brown	LED	Green LED Light Control
Yellow	Buzzer	Buzzer Control

Packing list:

No	Name	Quantity
1	Keypad Reader	1
2	Manual	1
3	Wall Fixing Plugs	2
4	Self Tapping Screws	2

Connection Diagram



3. Programming

Change the configure settings according to your application (optional).
Multiple configuration settings can be changed at one time: enter program mode, change desired settings, then exit program mode.

Set Master Code
The 4-6 digits Master Code is used to prevent unauthorized access to the system. To interface with the keypad reader, the manager will need a Master Code (factory default code: 123456), we highly recommend immediately updating it and recording the New Master Code.

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

Set Wiegand output format for EM Card

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Format Setting	1（26~37）#（Factory default is 26bits）
3. Exit	*

Set Wiegand output format for Mifare Card

Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Format Setting	2（26~37）#（Factory default is 26bits）
3. Exit	*

Set PIN output format
The keypad reader can be set to 4bits(factory default), 8 bits, or virtual card number format

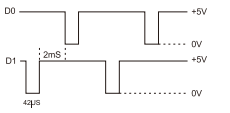
Programming Step	Keystroke Combination
1. Enter Program Mode	* **(Master Code) #**
2. Format Setting	3（0~2）# (0 means virtual card number output; 1 means 4bit output; 2 means 8 bits output)
3. Exit	*

Reset to Factory Default:
During the operating, there will be no change of LED and no beeps.
1. Power off, press * and power on
2. Hold the button for 3 seconds then release it.

4. Data Signal

The below table shows the wave form of pulse width time (the duration of a pulse) and pulse interval time (the time between pulses) of the Wiegand data output from the readers.
(Example 1010)

Pulse Times	
Description	Typical Time
Pulse Width Time	42 μs
Pulse Interval Time	2 ms



5. Keypad Transmission Format

The default keypad transmission format is 4bits, 8 bits or virtual card number format can be set.

Virtual Card Number
The reader will transmit the PIN data when it receives the last key (#) after PIN code
Example: PIN code: 999999
Press 999999 #, then the output format will be:
0000999999

4 bits
The reader will transmit the PIN data after every key is pressed:
1 (0001), 2 (0010), 3 (0011)
4 (0100), 5 (0101), 6 (0110)
7 (0111), 8 (1000), 9 (1001)
* (1010), 0 (0000), # (1011)
4 (0100), 5 (0101), 6 (0110)
7 (0111), 8 (1000), 9 (1001)
* (1010), 0 (0000), # (1011)

8 bits
The reader will transmit the PIN data after every key is pressed:
1 (1110 0001), 2 (1101 0010), 3 (1100 0011)
4 (1011 0100), 5 (1010 0101), 6 (1001 0110)
7 (1000 0111), 8 (0111 1000), 9 (0110 1001)
* (0101 1010), 0 (1111 0000), # (0100 1011)