

S200-REH/S200-RIC

Access Control Reader



User Manual

1. Introduction

The S200-REH/S200-RIC adopts aluminum alloy structure, capacitive touch sensing and luminous keypad. It can identify 125KHZ EM and HID cards (S200-REH) or 13.56MHZ IC and CPU cards according to ISO14443A (S200-RIC) and support password as well. Multiple output formats are available for this product by customization.

2. Technical Specifications

Operation voltage: DC12-24V

Standby Current: $\leq 38\text{mA}$

Operating Humidity: 0-95% RH (non-condensing)

Output Format: Wiegand26-37 (Wiegand 26 bits is default and Wiegand 27-37 bits can be customized)

Tamper Alarm Time: 60sec

Case Material: surface oxidized aluminum alloy

Back plane and holder material: galvanized iron

Panel Material: Acrylic

Keypad type: capacitive touch sensing keypad

Functions \ Model	S200-R EH	S200-R IC
Card type	EM and HID	IC and CPU
Frequency	125KHz	13.56MHz
Maximum Reading Distance	8cm	4cm
Operating Temperature	-40~60° C	-20~60° C

Note :

- The factory default output format is Wiegand 26 bits and other Wiegand formats between 27 and 37 bits can be customized.
- IC and CPU cards have to meet the ISO 14443A standard.

3. Wiring Definition

Order	Color	Functionality	Description
1	Red	+12V	Direct Current Power Supply
2	Black	GND	Ground
3	Green	D0	Wiegand output 1
4	White	D1	Wiegand output 2
5	Brown	LED	Green Light Input
6	Yellow	BELL	Buzzer Input

4. Installation

4.1 Install on the wall

- Step 1: Drill holes for screws and wires according to the position and size of location hole on the back holder.
- Step 2: Fix the holder with plastic expansion anchors and self-tapping screws in the accessories package as shown in Figure 4.1 (a).
- Step 3: Connect outlet wires and supply power to check if the product can work. If everything is ok, continue to next step.
- Step 4: Install the product on the holder according to Figure 4.1 (b). Then press down the product until a click sound. If the product cannot be pulled up, the installation is successful.

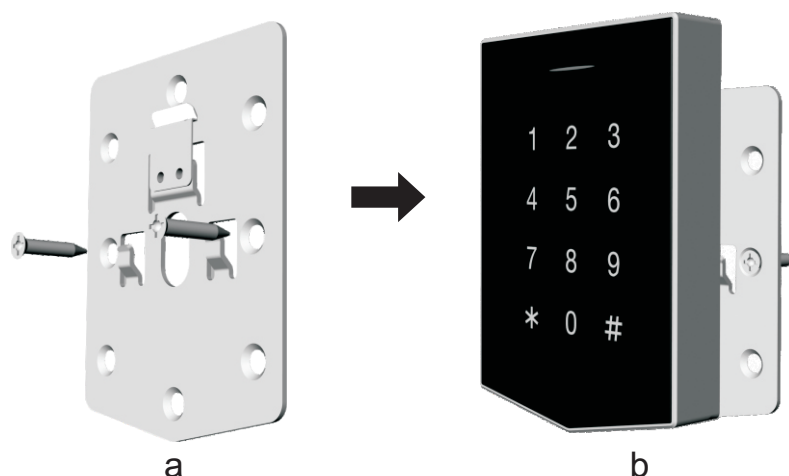


Figure 4.1 Install on the wall

4.2 Install on the 86 box

Fasten the holder to the 86 box using machine screws in the accessories package as shown in Figure 4.2 (a). Then follow the step 3 and step 4 in 4.1 (The installation in step 4 should be according to Figure 4.2 (b))

Note: If the machine needs maintenance after installation, knock on the bottom of the machine with a rubber hammer, thus the machine can be taken off.

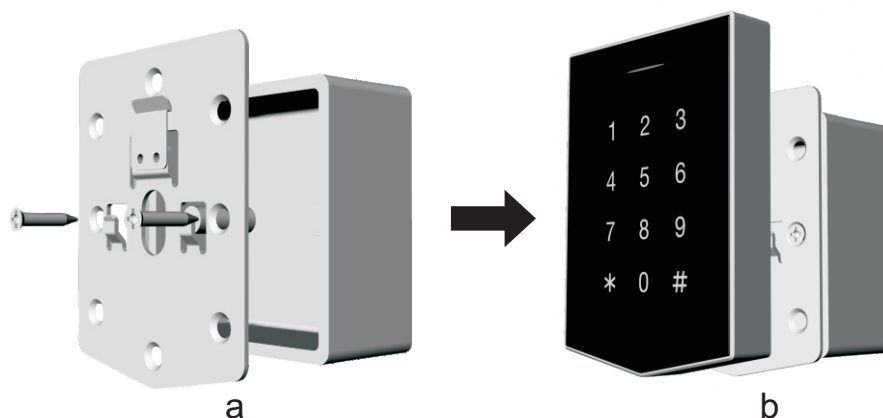


Figure 4.2 Install on the 86 box

5. Functional Specification

5.1 Swipe card, if the card is accepted, the indicator light will turn green and accompanied with a long beep. Then the light turns red and the Wiegand signal is sent simultaneously.

5.2 In inputting password to unlock the door, press a number key will get a short beep and press the asterisk key (*) will get a long beep. When confirm the password with the hash key (#), the indicator light will turn green followed with a long beep, after that the light turns red. Wiegand signal is output accompanied with the press of key.

5.3 The color of LED light is green at low voltage and red at high voltage.

5.4 The buzzer will alarm if the Bell is at low voltage. The alarm will stop when the input voltage rises to high level or the time exceeds 30sec.

5.5 When the enclosure is opened, the buzzer will alarm for one minute.

6. Wiegand Data Format

6.1 Buyers can customize different Wiegand format between 26 bits and 37 bits for reader specified for EM, IC or CPU card.

6.2 The output data format of HID card is decided by the format of the card

6.3 The green wire (D0) is for Wiegand 0 and the white wire (D1) is for Wiegand 1. The data cable is idle at high voltage and transmit signal at low voltage. The pulse width is 40s at low voltage and the pulse width interval is 2ms. The Figure 6.1 displays the sequential waveform of binary string 0101.

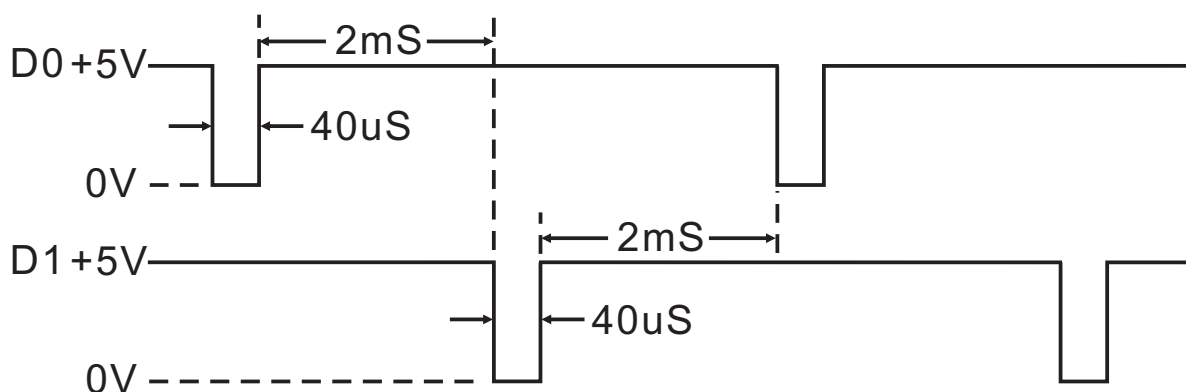


Figure 6.1 the sequential waveform of 0101

7. Output Data Format

There are three types of output data format: 4Bit, 8Bit and virtual card number. The 4Bit format is default and other formats can be customized.

7.1 Virtual card number

Input a 4~6 digits password and confirm it with hash key (#), the password will be transferred into a 10- digits decimal virtual card number and output as a binary string in Wiegand 26~37 bits format. (If the password is 999999, the decimal virtual card number will be 0000999999 and output as a 26 bits binary string when the output format is Wiegand26 bits)

7.2 4Bit data format without check digit

Each key press sends 4 bits data, the corresponding relation is:

1 (0001) , 2 (0010) , 3 (0011)
4 (0100) , 5 (0101) , 6 (0110)
7 (0111) , 8 (1000) , 9 (1001)
* (1010) , 0 (0000) , # (1011)

7.3 8Bit data format

Each key press sends 8bit output data, the first 4 bits is ones-complement code for the last 4 bits, the corresponding relationship is:

1 (11100001) , 2 (11010010) , 3 (11000011)
4 (10110100) , 5 (10100101) , 6 (10010110)
7 (10000111) , 8 (01111000) , 9 (01101001)
* (01011010) , 0 (11110000) , # (01001011)

8. Packing List

Name	Model	Qty.	Remark
Card Reader	S200-REH or S200-RIC	1	
User Manual	S200-REH or S200-RIC	1	
Machine Screw	Φ4mm×25mm	2	Fix on 86 Box
Rubber bung	Φ6mm×30mm	2	Used for normal installation
Self-tapping Screw	Φ4mm×25mm	2	Used for normal installation