1. Introduction

S200 adopts aluminium alloy structure, capacitive sensing and luminescent touch keypad, It can identify 125 KHZ EM and HID cards or 13.56 MHz IC and CPU (ISO14443A) cards (S200-IC). With 3 kinds of combination of card and PIN to unlock the door, can directly drive electric lock, support external exit button, door contact. Up to 1000 users capacity, each user owns one card and one 4-6 digits PIN .The Master can set 8pcs Master cards to achieve factory default, add users, delete users, authorization , prohibition ,multi-card access, anti-duress, n ormal open etc functions.

2. Feature

Operating voltage range: DC12～24V
Idle input current: <38mA
Operating temperature range: -40～60° C
Operating humidity: 0～95% (non-condensing)
Dimensions: 118X86X18.2mm
Lock Output Load: 1A or 50mS 4A impulse
Alarm Output Load: 1A

Card Type: EM and HID/125KHz or 13.56 MHz IC and CPU (ISO14443A) for optional
Reading Distance: 8cm
Quantity of Master Card: 8pcs
User Capacity: 1000 (include PIN user)
PIN Length Of User: 4-6 digits
PIN Length Of Master: 6-8 digits
Door open time setting: 50mS, 1-98 Second, Normal Open
Alarm Time: 60 Second
Door unlocked time limit: 10 Second
Door unlocked alert frequency: 10 times （1time/second）
Maximum card of multi-cards access: 10pcs
Anti- cracking times: 3 times

Body material: surface oxidation of aluminum alloy
Material of back plane and bracket: galvanized iron
Material of Front Panel: Acrylic
Keypad type: Capacitive sensing touch keypad
Keypad Color: Backlit keypad, reflected white light

Access mode: Single card, multi cards, card + PIN, card or PIN
Electric lock drive mode: NMOS output
Tools of resetting factory default: exit button or initializing Master card
External input device: exit button, door contact.
Output drive device: electric lock, Alarm
Electric lock type: Fail Safe, Fail Secure
Electric lock option: by program
Alarm type: anti tamper, anti duress, door contact, anti cracking.

3. Different models

Model / Functions	S200-EH	S200-IC
Card type	125KHZ EM & HID	13.56MHZ IC & CPU
The largest distance of reading	8cm	4cm
Operating temperature	-40～60° C	-20～60° C

4. Wiring diagram and installation

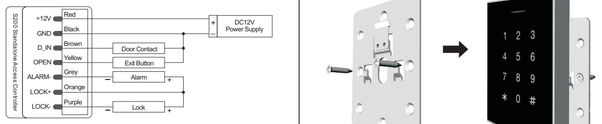
4.1 Drill the holes for the installation and the wires according to the position and the size of the holes in the back holder. (If mounting base is 86 box, no need drill holes on the wall)

4.2 Fix the back holder on the wall by the rubber bungs and the self-tapping screws. If mounting base is 86 box, no need rubber bungs and self-tapping screws, but need machine screws to fix it.

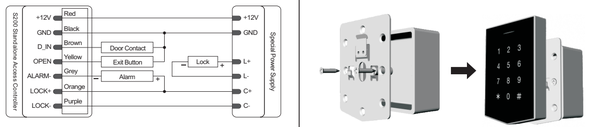
4.3 Making wiring according to the wiring diagram and then power on, to see if it can work normally. If it is OK, then you can go ahead.

4.4 Install S200 on the back holder according to the pictures. Pressing it downward hard and then you hear a "click" sound and if we couldn't pull upward which means that the installation is completed.

Remark: if you find some problems after the installation, which need to uninstall the machine. You can knock on the bottom of the machine by rubber hammer to take off the machine from the back holder.



Wiring diagram(common power supply)



Wiring diagram(special power supply for access)

Install on the Wall

Install on the 86 Box

5. Master Operation

Master operation includes Master Keypad operation and Master Cards Operation.

5.1 Master Keypad programming
Enter into Master keypad programming must verify PIN first, and method as follow:
Press[*] press more than 2 seconds) 888888 # , LED indicator turns into red flash, and other operations must be done under programming mode.
Notes: * needs press more than two seconds. 888888 is the factory default Master PIN, and if it is changed to new PIN, here should input the new Master PIN.
When master's PIN is wrong and the time is over 5s before you enter PIN again, it will return to standby mode.
After enter right master's PIN, it will also return to standby mode if there is no valid operation in 30 seconds.

All of the Master Keypad operation shown in the form below:

LED indicator				Function	Remark
Red	Red flash	Orange flash			
*	8888888#	0	6~8 digits new master PIN#, Repeat 6~8digits new master PIN #	Change the master PIN	
		1	ID Number #, Read card	To add a master card or a card user	You can add more users after adding one
			ID Number #, 8 or 10 digits card number #	To add a master card or a card user	
			ID Number #, 4~6 digits PIN #	To add a PIN user	
			Read card	To add a card user	
			8 or 10 digits card number #	To add a card user	
			*	Back to main menu	
		2	Read card	Delete one card	You can delete more users after deleting one
			8 or 10 digits card number #		
			1-1010 (ID) #	Delete one user or master card	
			*	Back to main menu	
		2	0000 #	Delete all users and PIN	
		3	0 #	Entry by Card only	Factory default 2 #
			1 #	Entry by Crad and PIN together	
			2 #	Entry by either card or PIN	
		4	0 #	To set door relay time 50mS	Factory default 5 #
			1-98 #	To set door relay time1-98S	
			99 #	Toggle mode	
		5	0 #	Connect to type A lock①	Factory default 1 #
			1 #	Connect to type B lock	
		6	0 #	Turn off remind of closing door	Factory default 0 #
			1 #	Turn on remind of closing door	
		7	0 #	No limit for error times	
			1 #	Device lockups for 10 minutes if 3 times wrong card or PIN	
			2 #	Alarm 1 minute if 3 times wrong card or PIN	
		8	0 #	Keypad backlight and indicator light normal off	Factory default 1 #
			1 #	Keypad backlight and indicator light normal on	
			2 #	Keypad backlight and indicator light on automatically	
		*		Exit from master programming mode	

NOTE:
①A type of lock refers to those lock that normally under standby status, there is no current for lock, when there is current the door will open.

B type of lock refers to those lock that normally under standby status, there is current for lock, when there is no current the door will open.

For example: operate few steps as below in the sequence of from left to right and top to bottom via pressing keypad or swiping card.

Standby status	Master PIN	Main menu	Input parameter or swipe card	Description of operation
*	888888#			Enter master programming mode (888888 is factory default PIN, if you already changed, pls use your new PIN)
		2	2#	Delete master card of ID2 #, adding user card.
			3#	Delete master card of ID3 #, deleting user card.
			0000#	Wrong operation, can't delete all user information (* 888888#, 2, 2#, 3#, 0000#, * during this operation, 2# and 3# are valid operation and can delete card accordingly, but 0000# follow other operations under 2, can't delete all user information. This is for in case deleting all user information accidentally.)
		*		Press *, back to main menu status.
		2	0000#	Delete all users. (* 888888#, 2, 0000#, this operation can delete all user information)
		1	2# Swipe card	Add master card of ID2#, adding user card.
			3# Swipe card	Add master card of ID3#, deleting user card.
			11# Swipe card	Add card user of ID11#,(via swiping card)
			12# 15159963#	Add card user of ID12#. (input 8bits card No.)
			13# 00021243418	Add card user of ID13# (input 10bits card No.)
			14# 123456#	Add PIN user of ID14#. E.g.: PIN is 123456.
			Swipe card	Add card user via swiping card, ID No. will be generated automatically.
			15159 964#	Add card user via inputting card No. ID No. will be generated automatically. (input 8bits card No.)
			00021 24342 #	Add card user via inputting card No. ID No. will be generated automatically. (input 10bits card No.)
		*		Press *, back to main menu status.
		4	0#	Set door open time. (50mS)
		5	0#	Set type of lock as fail secure lock.
		8	2#	Set back light on automatically.
		*		Exit programming mode.

5.2 Operation of master cards
Add master cards before use it. Like user card, master card is managed by ID No. ID 1# - 8# are for master cards with specific function. Master cards are added or deleted through its ID No. ID No. is allocated as below:

ID No.	Card Type	Function
1	Master card	initializing card
2	Master card	Adding user card
3	Master card	Deleting user card
4	Master card	Authorizing card
5	Master card	Prohibiting card
6	Master card	Setting card (to set open door via multi-card)
7	Master card	Anti-duress card
8	Master card	Card for door normal open
9	Master card	Preserved
10	Master card	Preserved
11-1010	User card	Open door

5.2.1 Methods of adding master card :
Press: * 8 8 8 8 8 # 1 1 #read card *,Add initializing card
Press: * 8 8 8 8 8 # 1 2 #read card *,Add adding user card
Press: * 8 8 8 8 8 # 1 3#read card *,Add deleting user card
Press: * 8 8 8 8 8 # 1 4 #read card *,Add authorizing card
Press: * 8 8 8 8 8 # 1 5#read card *,Add prohibiting card
Press: * 8 8 8 8 8 # 1 6 #read card *,Add multi-card open door setting card
Press: * 8 8 8 8 8 # 1 7#read card *,Add anti-duress card
Press: * 8 8 8 8 8 # 1 8 #read card *,Add door normal open card

Remark: The first""have to be pressed more than 2 seconds. 888888 is factory default master PIN. And if it is changed to new PIN, here should input the new Master PIN. If Master card above is already added, you have to delete the previous one and then add another new Master card.

5.2.2 Master card delete way:
Press: * 8 8 8 8 8 # 21 #read card *,delete initializing card
Press: * 8 8 8 8 8 # 22 #read card *, delete adding user card
Press: * 8 8 8 8 8 # 2 3#read card *, delete deleting user card
Press: * 8 8 8 8 8 # 2 4 #read card *, delete authorizing card
Press: * 8 8 8 8 8 # 25#read card *, delete prohibiting card
Press: * 8 8 8 8 8 # 2 6 #read card *, delete multi-card open door setting card
Press: * 8 8 8 8 8 # 2 7#read card *, delete anti-duress card
Press: * 8 8 8 8 8 # 2 8 #read card *, delete door normal open card

5.2.3 Master card function & operation
5.2.3.1 Initializing card
ID No. is 1. Swipe initializing card once, the buzzer will give two beeps, means reset to factory default successfully. The master cards and card users & PIN users will not be deleted.

Item	Default	Parameter Description
Master card	no	Won't be deleted
Card and PIN user	no	Won't be deleted
Master PIN	888888	factory default PIN
Door open way	2	Card or PIN
Door open time	5	5s
Lock type	1	B type of electronic lock: unlock when power off
Remind of closing door	0	Off
Anti-crack function	0	Off
Keypad and LED indicator	1	Normal on
Number of multi-card open door	1	Single card open
User authority	1	User card and PIN enable
Electronic lock state	0	Off

5.2.3.2 Adding user card
ID No. is 2. Using this card can add users quickly. The operation as following:
Swipe adding user card once , swipe unregistered user card one by one , swipe adding user card once
We can press " * " at any time to exit from operation. It will exit automatically if there is no operation in 30s.
Swipe adding user card once, enter adding user state, the buzzer will give two beeps, LED indicator turns into orange. And swipe adding user card again exit the adding user state. The buzzer will give one beep, LED indicator turns into red. If add a user card already existed, buzzer will give "beep beebp eep", the operating is fail. But we can do other operation.
Every user card added successfully, an initial PIN 1234 will be generated. The PIN cannot open door, only for changing new PIN.

5.2.3.3 Deleting user card
ID No. is 3. The user card can be deleted quickly by this master card. Operation as follow:
Swipe deleting user card once , swipe user card one by one , swipe deleting user card once
We can press " * " at any time to exit from operation. It will exit automatically if there is no operation in 30s.
Swipe deleting user card once, enter deleting user state, the buzzer will give two beeps, LED indicator turns into orange. And swipe deleting user card again exit the deleting user state. The buzzer will give one beep, LED indicator turns into red. If delete a user card not existed in the device, buzzer will give "beep beep beep", the operating is fail. But we can do other operation.

5.2.3.4 Authorizing Card
ID number is 4. This master card can authorize card and PIN user access authority. Operation as follow:
Swipe authorizing card once
Swipe this master card, the buzzer will give two beeps, all valid card and PIN user can open door.

5.2.3.5 Prohibiting Card
ID number is 5. This master card can prohibit card and PIN user access authority. Operation as follow:
Swipe prohibiting card once
Swipe this master card, the buzzer will give two beeps, all valid card and PIN user cannot open door.

5.2.3.6 Setting card of multi-card open door
ID number is 6. This master card can set 1-10 user cards to open the door. The door will open by swiping different user card one by one depends on how many card we set.
Operations as follow:
Swipe setting card 1-10 times:
Swipe setting card once , # means swipe one user card, door will open.
Swipe setting card twice , # means swipe two user cards one by one, door will open.
Swipe setting card three times , # means swipe three user cards one by one, door will open.
.....
Swipe setting card ten times , # means swipe ten user cards one by one, door will open.
Press # at any time we can exit from programming, if there is no any operation in 5 seconds, system will exit programming.
Swipe this master card once, the buzzer will give two beeps, then swipe this master card 2-10 times, the buzzer will give one beep. If swipe this card over 10 times The buzzer will give three beeps to indicate wrong operation. The interval time of swiping card should less than 5 seconds. The swiping times of the setting card before we exit from programming means how many different user cards we swipe to open door.
There are three access modes to open door (entry by Card, entry by Card & PIN, entry by Card or PIN).
When set 1 card to open the door, three access ways (card, card & PIN, card or PIN) are valid, when set 2-10 user cards to open the door, then the PIN are invalid, must swipe 1-10 user card in turn to open the door.

5.2.3.7 Anti-duress Card
ID number is 7. When we are under threat and forced to open door, we can use this master card to open door and meanwhile send a hidden alarm not be found. Operation as follow:
Swipe anti-duress card
Swipe the Anti-duress card, the door will normally open and send a hidden alarm to security control center but the built-in buzzer will not ring.

5.2.3.8 Normal Open Card
ID number is 8. Use this master card, we can keep door open and lock unlocked. Even door is close but won't be locked. Anyone can open the door without swipe user card. Operation as follow:
Swipe normal open card once
lock unlocked, even door is closed it won't be locked. People can open door no need card or PIN.

Swipe normal open card again
back to previous setting status, when door is closed it will be locked. People can open door by swiping card or input PIN.

6. User Operation

6.1 Open door with single card
Swipe user card, door open.
6.2 Open door with multi-cards
Swipe 2-10 user cards with interval time less than 5 seconds.
Swipe user card 1 , Swipe user card 2 , Swipe user card 3 ....., door open.
6.3 Open door with card & PIN
Swipe user card , then input 4-6digits PIN within 5 seconds.
Swipe user card , Input 4-6 digits PIN , # door open.
6.4 Open door with card or PIN
Swipe user card , door open.
Or Input 4-6 digits PIN , # , door open.
6.5 Change the user PIN
* , Swipe user card , Input 4-6 digits old PIN, #, Input 4-6 digits new PIN, #,
Repeat input 4-6 digits new PIN, #
Or * , Input user ID, #, Input 4-6 digits old PIN, #, Input 4-6 digits new PIN, #,
Repeat input 4-6 digits new PIN # .
NOTE:
1, User ID is from 11-1010
2, * key have to be pressed more than 2 second, PIN user have to get ID number and original PIN from operator, card user have to change PIN by swiping card in the first time, the original PIN is 1234, and the new pass word could not be 1234.

7. Alarm Function

7.1 Anti tamper alarm
When controller is opened illegally, buzzer built-in and external alarm will operate.
7.2 Door contact alarm
When door contact is connected and the door is opened illegally, buzzer of controller and external alarm will operate.
7.3 Anti-duress alarm
When under threat, swipe anti-duress card, the door will open as normal, the external alarm w ill operate, buzzer of controller will not operate.

7.4 Anti-cracking alarm
If anti-cracking alarm is on, buzzer of controller and external alarm will operate while swipe invalid card or input wrong PIN more than 3 times.
7.5 To remove the alarm
Swipe valid card or input master PIN can remove the alarm. If there is no operation, the alarm will remove automatically after 1 minute.

8. Anti-cracking function

Function set as below:
Press * 8 8 8 8 8 # 7 1 # * , keypad lockup function is enabled.
When swipe invalid card or input wrong PIN 3 times, the keypad will lockup for 10 minutes and cannot do any operation, it will be removed after 10 minutes automatically.
Press * 8 8 8 8 8 # 7 2 # * , alarm function is enabled.
When swipe invalid card or input wrong PIN 3 times, alarm 1 minute, it could be removed by swiping valid card or input master PIN.
The first * have to be pressed more than 2 seconds, 888888 is factory default master PIN, new PIN have to be input if the factory default master PIN was changed.

9. Remind of Closing Door Function

If want use this function, door contact should be connected and enable this function set as below:
Press * 8 8 8 8 8 # 6 1 # *, enable the function.
The first * have to be pressed more than 2 seconds, 888888 is factory default master PIN, new PIN have to be input if the factory default master PIN was changed.
When door is open and not close in 10 seconds, buzzer of controller will beep per second to remind people to close door, it will stop after door is locked.

10. To Reset Factory Default

Power off, press exit button, hold it not release and power on, after you hear "beep beep" then release it. Input 6-8 digits new master PIN, press" # " within 15 seconds, reset to factory default successfully. The master PIN is 6-8 digits new master PIN we just input.
It will not reset to factory default and remain all previous settings if the PIN was not input successfully, or no any operation within 15 seconds after we hear "beep beep".

11. Sound And Light Indication

Operation Status	Buzzer	LED
Standby		Red
Press keypad	Beep	
Open the door	Bee-eep	Green
Operation successful	Bee-eep	Green
Operation failed	3 beeps	
Input PIN		Red flash slow
Enter into programming mode		Red flash slow
In the programming mode		Orange
Enter into add card mode		Orange
Enter into delete card mode		Orange
Enter via swiping Master Card	2 beeps	
Exit via swiping Master Card	Bee-eep	
Open Door via Swiping Card	Bee-eep	Green
Remind of closing door	Bee-eep	Red Flash Quick
Alarm	Alarm sound	Red Flash Quick

12. PACKING LIST

Name	Model	Qty.	Remark
Access Controller	S200-EH or S200-IC	1	
User Manual	S200	1	
Machine Screw	Φ4mm×25mm	2	Fix on 86 Box
Rubber bung	Φ6mm×30mm	2	Fix on other place
Self-tapping Screw	Φ4mm×25mm	2	Fix on other place

S200

Metal Standalone Access Controller



User Manual