BC2019 Access control

1 Product overview

1.1Product introduction

This product uses high-strength zinc alloy housing, Proximity card (EM card, also known as ID card) or password to open the door, built-in highly integrated micro-controller, simple circuit, safe and reliable, economical and durable, suitable for office, villa etc.

1.2 Product Features

> 1000 user cards bound with 1000 user passwords, and the user can modify password by himself
> Opening door modes: card, card + password, card or password, password.
> Opening time: 50mS, 1-98 seconds for normal mode, 99 seconds for switch mode;
> It can connect with the door magnetic detection for alarm or door closing prompts;
> Built-in high current MOS tube, can directly drive external alarm;
> Safe mode can be set: 10 times of invalid card or password will automatically lock the machine for 10 minutes;
> Can connect with an exit button, convenient to open the door from inside.
> Safety screw at the bottom to prevent malicious destroy.

1.3 Functional component

- Indicator light
- LOGO
- Button frame indicator
- Metal Key
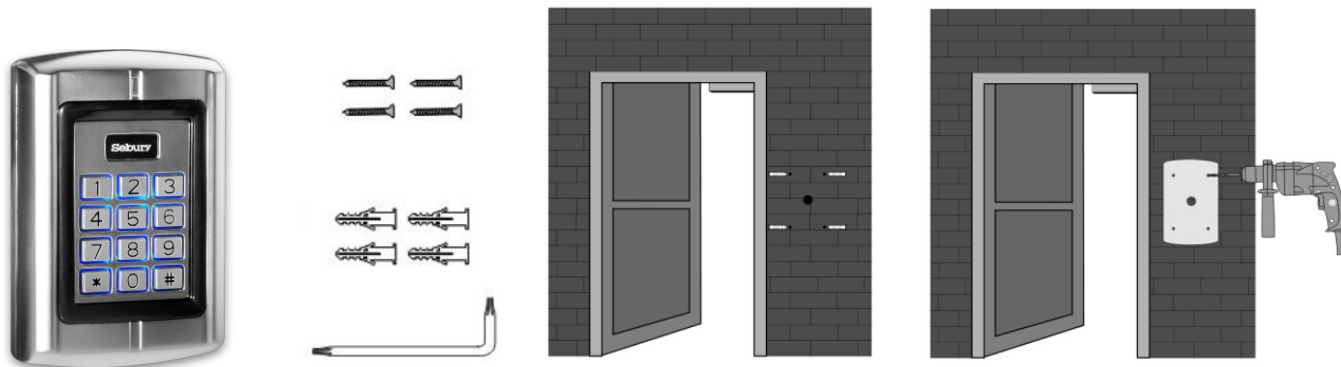- Card reader antenna
- Metal body

1.4 Technical parameters
> Working voltage: DC12±2V
> Static current: ≤20mA
> Operating current: ≤100mA
> Drive electric lock current: ≤3A
> Working environment temperature: -20~50°C
> Working environment humidity: 0~95% (no condensation)
> Maximum card reading distance : 5cm

2 Installation, wiring and Debugging

2.1Installation
Unscrew the anti-tamper screw on the bottom of the product with the special anti-tamper screwdriver, remove the back case of the product, then according to the opening position of the back case, use the impact drill to open the corresponding holes on the wall, make a hole with diameter larger than 8mm, and four holes with diameter of 6mm, then insert four matching plastic expansion screws, and fix the back case to the wall with four matching self-tapping screws.
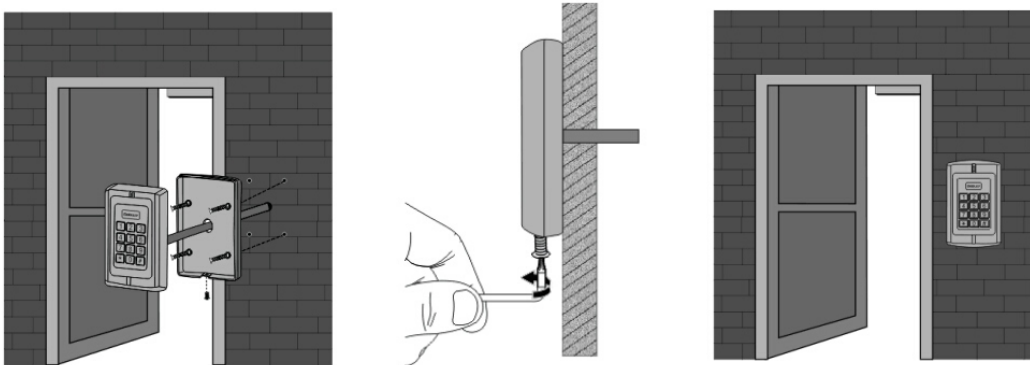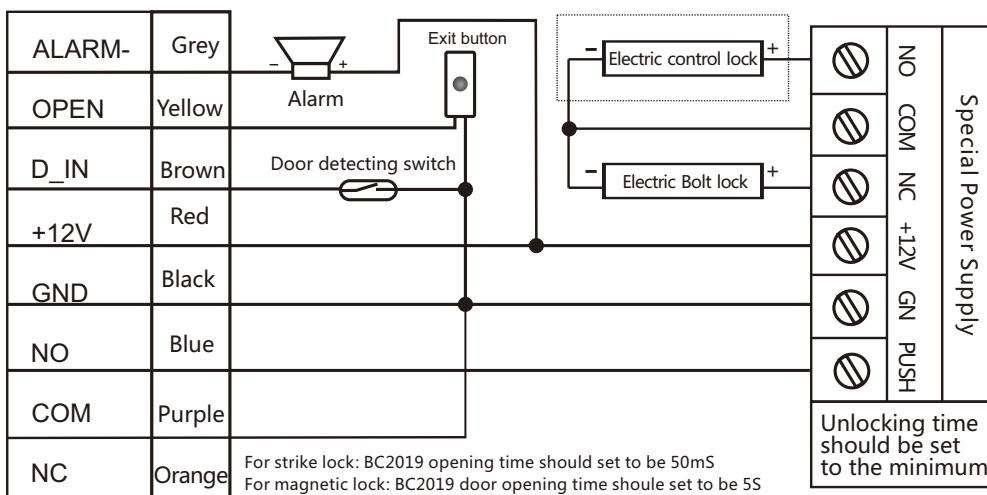As shown below:

2.2 Wiring

According to the selected wiring diagram, connect the wire according to the wiring diagram one by one. The rest unused wire should be wrapped by the electrical tape. Be careful not to short circuit, or the power supply will be burned out, then insert the wires into the access control keypad 8P socket. check every wire is correct, briefly turn on the power to see if the indicator LED light is normal, and the buzzer will beep once, otherwise cut off the power supply immediately, Check the wires again.

If everything is correct, install the front case of the product on the bottom case on the wall. Remove the screws and fix them. As shown below:

The correspondence between the color of wire and their function:

1	ALARM	Grey	Alarm Switched negative when active
2	OPEN	Yellow	To Door EXIT Request Button Then Negative
3	D_IN	Brown	To Door Contact Then To Negative
4	12V	Red	(+) 12VDC Positive Regulated Power Input
5	GND	Black	(-) Negative Regulated Power Input
6	NO	Blue	Door Strike Relay NO
7	COM	Purple	Door Strike Relay Com
8	NC	Orange	Door Strike Relay NC

For strike lock: BC2019 opening time should set to be 50mS
For magnetic lock: BC2019 door opening time shoule set to be 5S

Unlocking time should be set to the minimum

2.3 Debug

Turn on the power supply and test according to the instructions. The debugging will be completed until the lock can be opened correctly by reading card, password and exit button.

3 Basic functions

Operating conventions :
> A long sound " Di- " indicates correct operation. Three short sounds " Di Di Di " indicate wrong operation . The indicator light flash in green means operate correctly.
> " # " indicate confirm completed, normally used behind pass word, ID number, or parameter.
> " * " indicate cancel the current operation or return to the previous menu.
> The management menu is fixed to 1 digit from 0-6, cannot press key " # " after it. After entering setting menu, the indicator light turns to orange.
> Under administrator mode, it will automatically exit to standby state if there is no operation within 30 seconds.
> Under non- administrator mode, it will automatically exit to standby state if there is no operation within 5 seconds.

Light and buzzer indication:

operation status	Light color	Buzzer
Standby	Red	
PIN inputting	Red flash	
Read the card in Card & PIN mode	Red flash	
Enter into administrator mode	Red flash	
Enter menu setting status	Orange	
Successful operation	Green	A long sound
Unlock the lock	Green	
Press numeric key		A short sound
Press *		A long sound
Failed operation		Three short sound

3.1 Enter into administrator mode

| * | 6 digits administrator password | # |

888888 is the default factory administrator code. It fixed to 6 digits.
For example, press *888888* to enter into administrator mode.
Enter into the administrator mode first before start the below operations.

3.2 Change the administrator password

Press | 0 | new password | # | new password | #

For example, change administrator password to 999999, press 0 999999 # 999999#

3.3 Add card user

Below 3 methods to add a card user, the ID number range is 0-999, the user password is fixed to 6 digits, and it can be operated continuously. Press * to exit the add user menu.

3.3.1 Quickly to add card user

press | 1 | read card | ... | *

For example, continuously add 3 cards. Press 1,read card, read card, read card *

3.3.2 Specifying the ID number to add a card

Press | 1 | ID number | # | read card | ... | *

For example, continuously add 3 cards with ID numer as 1,2,3

Press 1 1#read card 2# read card 3#read card *

3.3.3 Specifying the ID number to add a user password

| 1 | (ID number) | # | (6 digits user password) | # | ... | *

For example, consecutively set 3 passwords with ID numbers 4, 5, and 6: 14#444444#5#555555#6 #666666#*.

3.4 Deleting users

There are three ways to delete a user, where the ID number ranges from 0 to 999, every ID number corresponds to a card or password, and the deletion ID number indicates that a card or a password is deleted, and the operation can be continued. Press the * key to exit the delete user menu

3.4.1Quickly delete the card

| 2 | swipe card | ... | *

Example, delete 3 cards continuously: 2, swipe card, swipe card, swipe card, *

3.4.2 Specify ID Number to Delete Card or Password

| 2 | (ID number) | # | ... | *

For example, continuously delete three users with ID numbers 1, 2, and 3: 2,1#2#3#*.

3.4.3 Deleting all users

| 2 | 0000 | # | *

3.5 Setting the door opening method

| 3 | 0 | # | Open the door by card.
| 3 | 1 | # | Open the door by card and password.
| 3 | 2 | # | Default value, open the door by card or password.
| 3 | 3 | # | Open the door by password.

Example, set the card and password to open the door: 3,1#.

3.6 Setting the door opening time

`4` `0` `#` Default value, the door opening time is 50 milliseconds.

`4` `(1-98)` `#` the door opening time is 1-98 seconds. The default is 5 seconds

`4` `99` `#` Set the keypad to switch mode, that is, change the lock status every time once door opened

For example, set the door opening time to 5 seconds: 4,5#.

Note: The 50-millisecond door opening time is suitable for the electric control lock or the access control special power supply. The switch mode is suitable for the normally open normally closed door.

3.7 Set the alarm time

`5` `0` `#` default , No alarm

`5` `1-3` `#` alarm time is 1-3 minutes

Eg. Set the alarm time for 1 minute: 51#

3.8 set the door contact

`6` `0` `#` default , door contact invalid

`6` `1` `#` door contact valid

Eg. Set the safe mode in lock mode : 61#

There are two functions if connect with door contact by default:

1.The door left open in 10 seconds after opening, the built-in buzzer will ring. Close the door , swipe the valid card or input correct user PIN Code #, wait for more than 1 minutes will release alarm.

2.If the door was opened by force, or open the door after 120 seconds when normal unlock. The outer connecting alarm and built-in buzzer will alarm simultaneously. swipe the valid card or input correct user PIN Code #, wait for more than 1 minutes will release alarm.

3.9 Setting the security mode

`7` `0` `#` Default value, set to normal mode

`7` `1` `#` Set to lock mode. When the invalid card, user password or administrator password is continuously tried 10 times, the keypad will be automatically locked for 10 minutes.

`7` `2` `#` Alarm mode. If there are continuously 10 invalid cards, 10 incorrect PIN number or administrator code within 10 minutes, both the buzzer and alarm output will be operated. Swiping valid card, or input valid PIN number, or wait for 1 minute will release the alarm output.

For example, set to lock mode: 71#

3.10 Exit from the administrator mode

In the administrator mode, press * key several times, until the indicator light is red(constantly).

3.11 Change user's password

3.11.1 Change password by card

*	Swipe user card	(Old user password)	#	(New password)	#	(New password)	#

Example, Change user password by card : * , Swipe user card 1234#123456#123456#

Note: A initial password 1234 will be generated when adding a new card user. The initial password can't open the door, Just can be used to change the card user's password. The new password should be in 6 digits.

3.11.2 Change password by ID number

*	(ID number)	#	(old password)		(new password)	#	(new password)	#

Example Change user's password by ID, *1#123456#111111#111111#

Note: when changing password by ID number, the old user password can not be initial password 1234

3.12 User to open the door

Read the card, or enter 6 digits user's passwords, or press the Exit button

Note: No pressing # key after entering the password reduces frequency of using # key and greatly improves the service life of # key. When opening the door, there will be a long sound of "beep" and the indicator light will turn green during unlock. when the opening mode is card and password, the interval between reading card and enter the password cannot exceed more than 5 seconds.

3.13 Resetting To Factory Default Setting

When administrator password is out of mind, or after user randomly adjust various parameters, you can return to the normal situation by resetting to factory default setting. As following: power off, press *and hold it, then power on, release it until hear two beeps, and master password will revert to 888888,

And the keypad parameters are reset to factory default setting, detail is in the "administrator mode operation summary table", the user's card and password won't be deleted.

4. Administrator mode operation summary table

Enter Master Operation Mode: *(6 digits administrator code)#			
Menu	Parameters or operation steps	Function	Default
0	（new administrator password）#,（new administrator password again)#	Modify administrator password	888888
1	* read card,...,*	Quickly add user card	
	(ID No.)# , read card,...,*	Add user card with ID No.	
	(ID No.)#(user pin)#,...,*	Add user pin with ID No.	
2	Read card,...,*	Quick delete card	
	(ID No.)#,...,*	Delete card or pin with ID No.	
	0000# , *	Delete all the users	
3	0#	Entry by card	2
	1#	Entry by card with pin together	
	2#	Entry by card or pin	
	3#	Entry by only pin	
4	0# to set door relay time 50ms	To set door relay time 50ms	0
	（1-98）#	To set door relay time 1-98s	
	99#	To set the switch mode	
5	0#	Set to normal mode	0
	(1-3)#	Set the alarm time to 1-3 minutes	
6	0#	To disable door open detection	0
	1#	To enable door open detection	
7	0#	To set normal mode	0
	1#	To set lock mode	
	2#	TO set alarm output	

5. Simple Troubleshooting

Fault phenomenon	Fault Cause	Reason & Solution
Unusual Indicator light	Power voltage too low or too much interference	Change to qualified power supply, cable or restoring power
No response	Continuously swipe in lock mode or input the pin code more than 10 times	Restoring power or wait for 10 min.
Abnormal unlocking	Wrong electric lock mode	Set the different modes follow the way of different electric locks
	Wrong wiring	Follow the right way of wiring
Can't enter administrator mode	Make sure the red indicator light normally on before press *	Follow the right operation way
	Forget the master password	Factory reset
Can't enter by card	Set the mode of entry by pin	Set the right open mode
	Too much interference of power or power voltage too low	Change to good power supply or cable
Can't enter by pin	1. Need to set the pin first, master setting or users change the 1234 to new 6 digits pin by themselves	Set or change the user pin password
	3. Input the wrong pin password	Input the right pin password
Digits key invalid	To set the entry by card or card & pin	Set the right entry mode