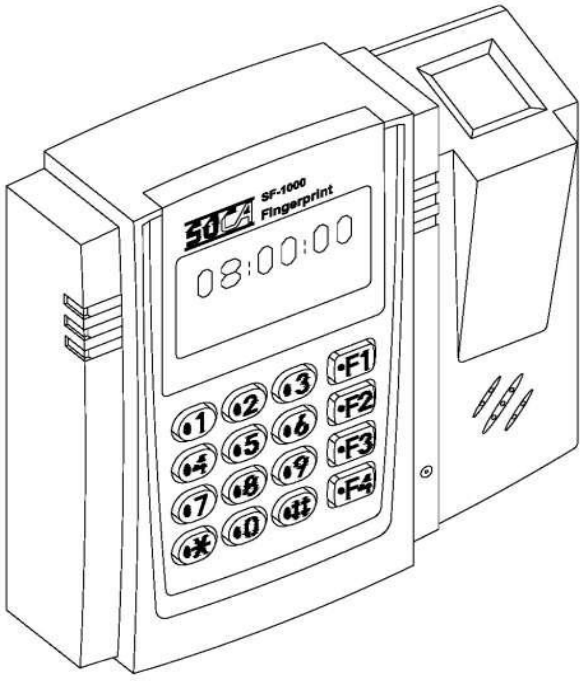
SOCA®

SF-1000

FINGERPRINT OPERATION AND INSTALLATION MANUAL



SOCA TECHNOLOGY CO.,LTD.

2005 SEPTEMBER

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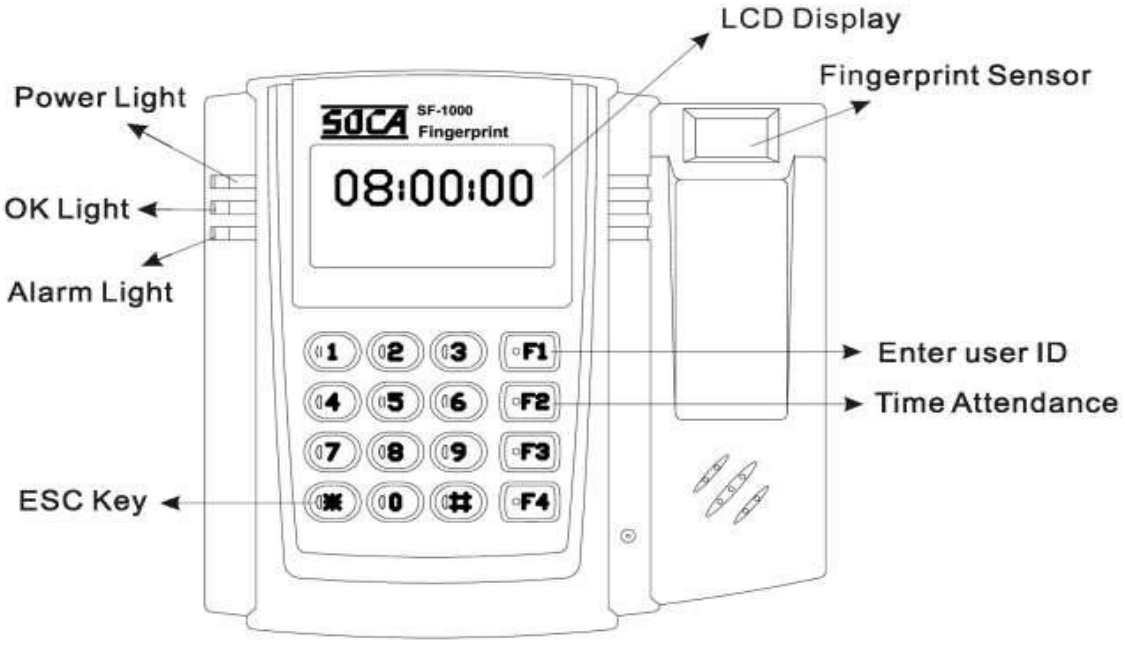
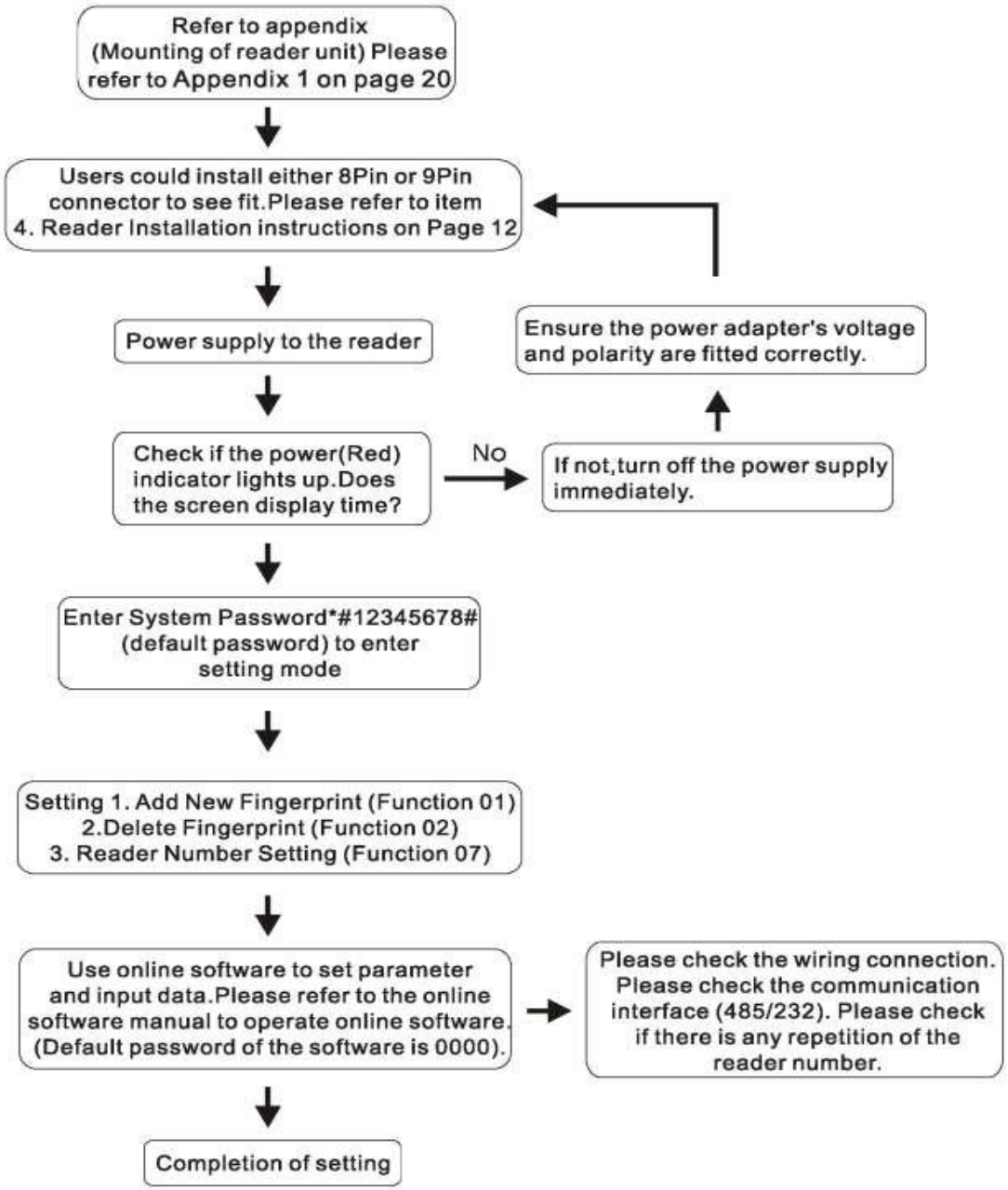
1. Specifications and Reader Front Panel

- ★ **Standard STN 128 x 64 LCD with built-in Tradional Chinese,Dimplified Chinese and English interface shows card number and user name simultaneously.**
- ★ **Built-in RS-232 and RS-485 communication interface with 32 sets and can be expanded to maximum of 255 sets(optional). With an optional of modem or TCP/IP for online data transmitting control.**
- ★ **Maximum capacity of proximity main system is 4000 cards,and capacity of 4400 fingerprints to register. Maximum capacity of stand alone unit can reach up to 10,000 historical data.**
- ★ **Each user can register 3 separate sets of fingerprints in case of any injured finger unable to recognize when register,and the last finger-print enrolled is set as anti-duress fingerprint.**
- ★ **Backlight 16(4x4) luminous stainless steel keypads included 4 function keys and 3 LED lights (Red: POWER , Green: OK , Yellow: DENY).**
- ★ **Built-in printer interface to connect with parallel printer to print all data simultaneously.**



2. Installation procedures



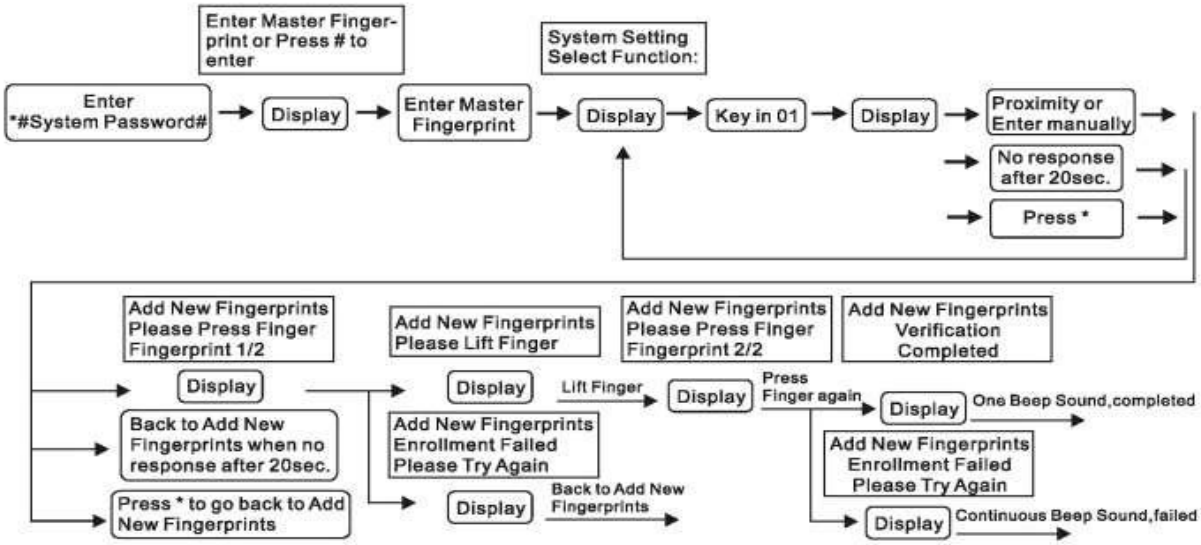
3、SETTING MODES & FUNCTIONS

- **For new user, please use default password *#12345678# to enter system mode. Please press # key when system menu appears to enter to Add New Master Fingerprint automatically. Please enter password and master fingerpeint to enter system menu for any further setting mode.**
- **Use of master fingerprint to enter system menu can to set all functions.**
- **Press # key can only to enter system menu to set the following functions:**

09-Activate Anti-Duress
10-Setting Reader Number
12-Voice
14-Version
15-Time Setting
19-Door Sensor Delay
20-Alarm
22-Door Sensor
23-Anti-tamper
24-Push Button Door Open
25-Beep
27-Manual Time Attendance Mode
28-Display Card Number Mode

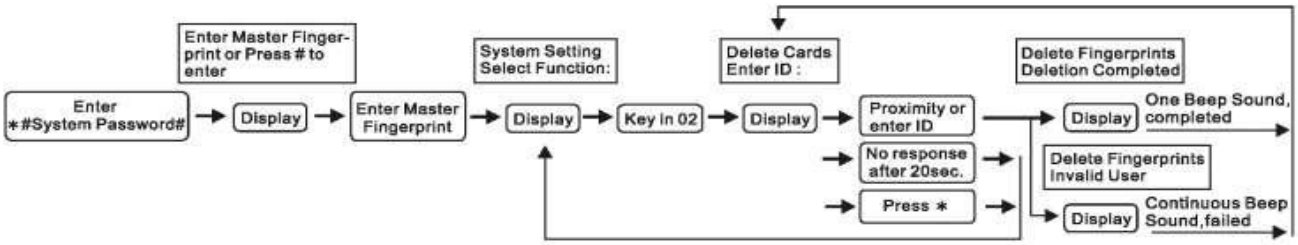
3.1 Add New Fingerprint

When adding new fingerprint,user must enter ID or card number. Maximum of 3 fingerprints can be added for a single user.User may enter his or her ID when adding second fingerprint.Entering card number can be done manually or by proximity. When entering card number manually,user does not need to enter all the numbers,for example,enter 1234 and press # to add when card number is 00001234.



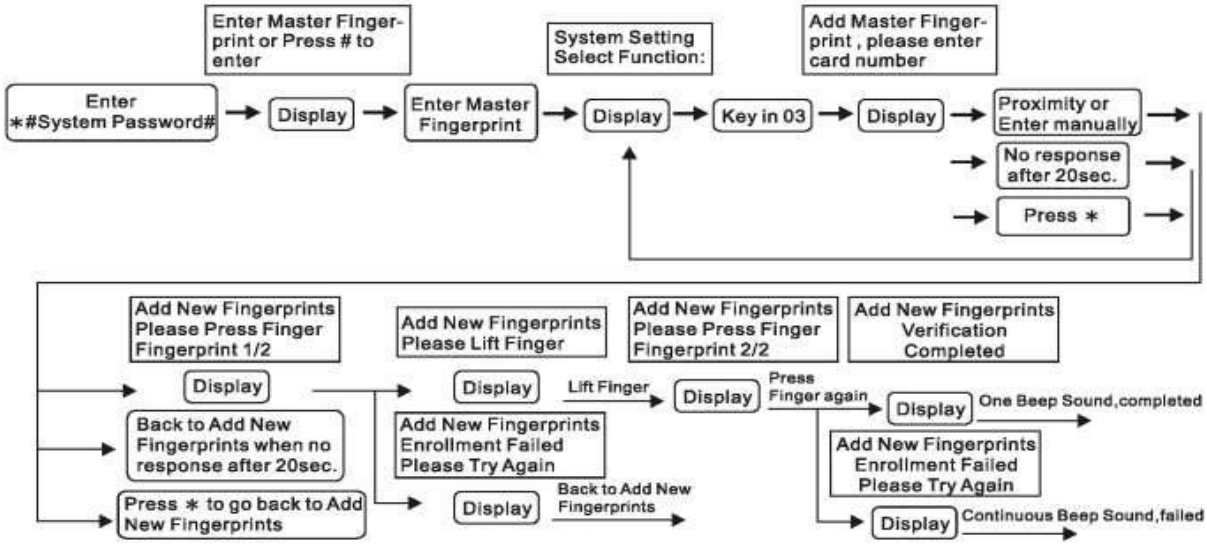
3.2 Delete Fingerprint

Entering user's 8-digit ID or card number to delete user's fingerprints. Entering card number can be done manually or by proximity. When entering card number manually,user does not need to enter all the numbers,for example,enter 1234 and press # to add when card number is 00001234.



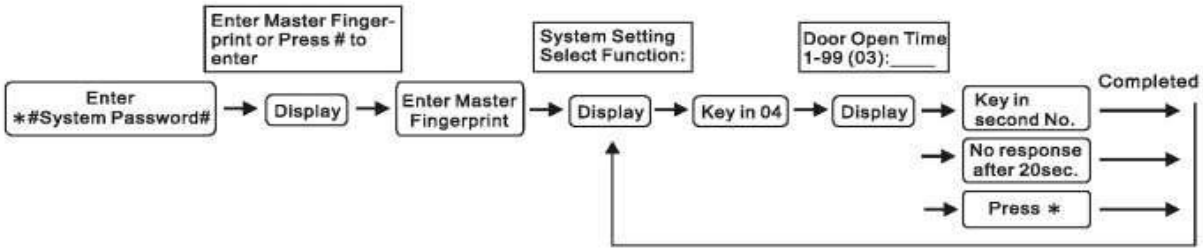
3.3 Add New Master Fingerprint

Maximum of 5 master fingerprints can be added. When user A has added 3 master fingerprints,user B ,therefore,can only add up to 2 master fingerprints. Please refer to Step 1 for adding new fingerprints.



3.4 Setting Door Open Time

Default value of door open time is being set at 3 seconds. User may set its time from 1-99 seconds.



Note : Please add 0 in front of the number or press # when entering one-digit number to set.

Example : When setting time is 3 seconds,enter 03 or 3#.

3.5 Setting Door Open Mode

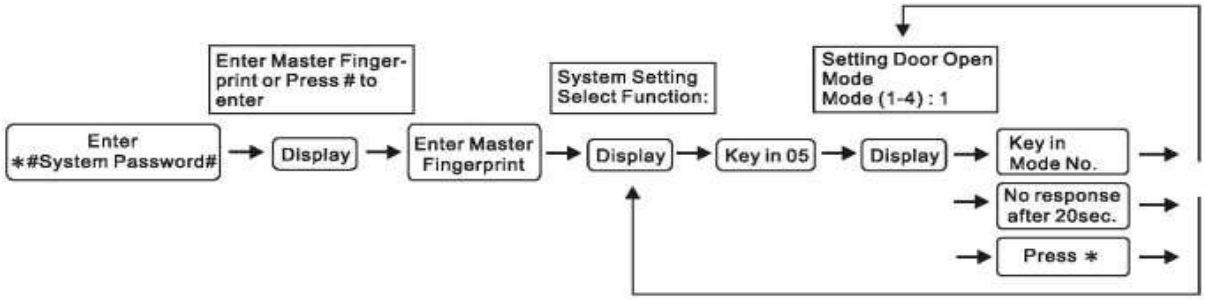
There are 4 door open modes (default set as 4).

(1) Proximity door open : Verifying card only,no fingerprint needed.

(2) Proximity and fingerprint : Both card and fingerprint are needed to enter.

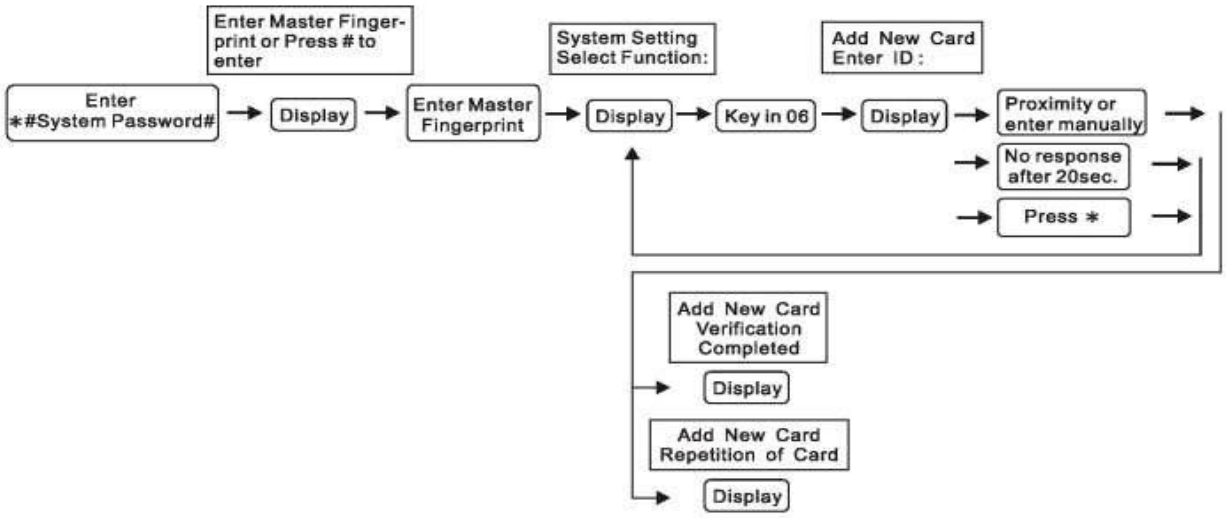
(3) Proximity and fingerprint or entering ID and fingerprint : Either card or ID number (press F1) plus fingerprint to enter.

(4) 1:N fingerprint matching : Only fingerprint needed to enter.



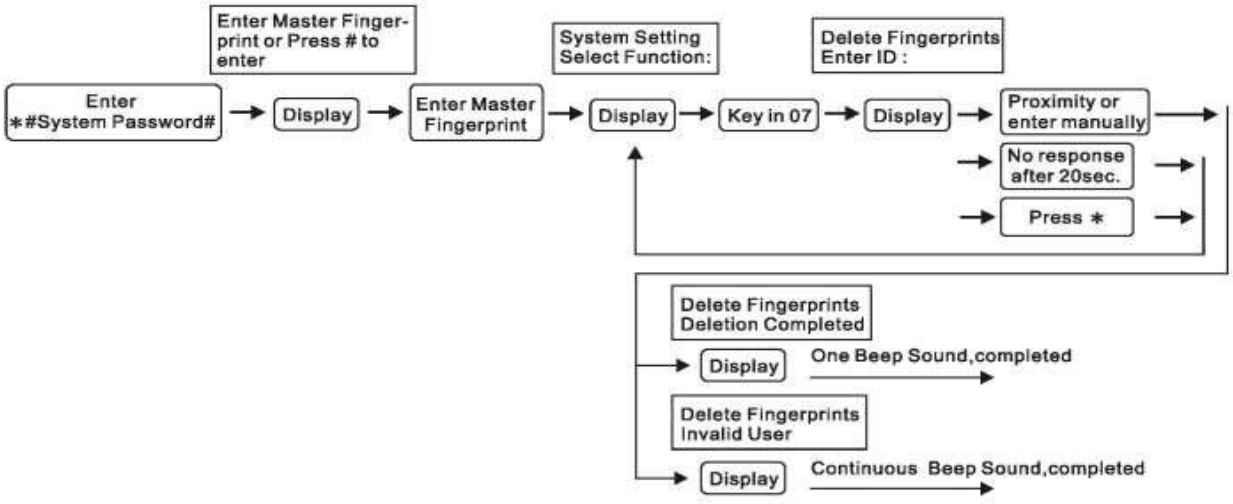
3.6 Add New Card

Add new card for proximity door open. Entering card number can be done manually or by proximity. When entering card number manually, user does not need to enter all the numbers,for example,enter 1234 and press # to enter when card number is 00001234.



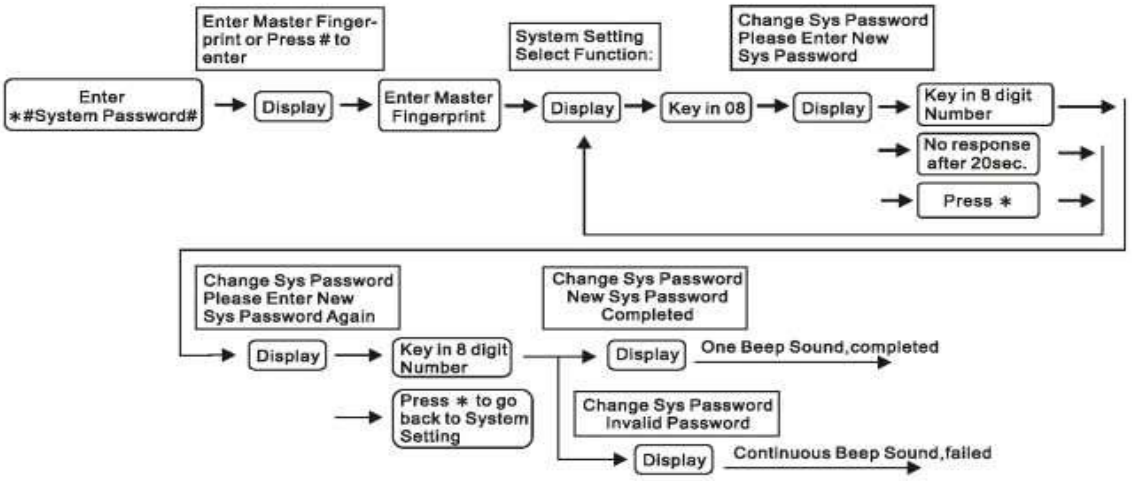
3.7 Delete Cards

This function is deleting card for proximity without any fingerprints registered.Please refer to function 2 to delete user's fingerprints if any.Entering card number can be done manually or by proximity. When entering card number manually,user does not need to enter all the numbers,for example,enter 1234 and press # to enter when card number is 00001234.



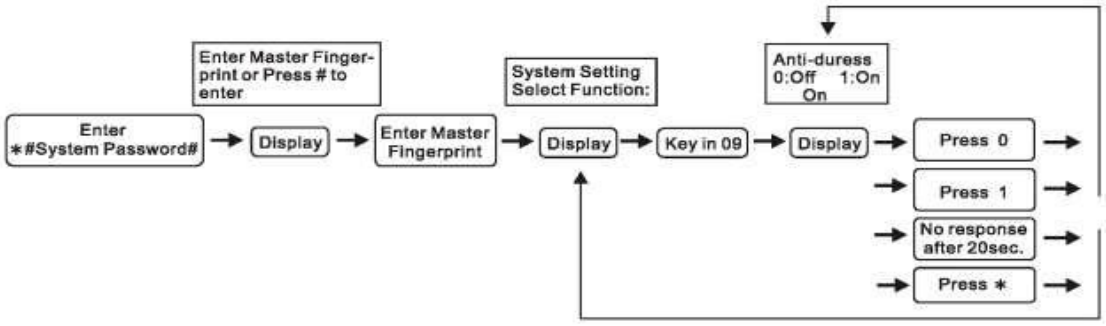
3.8 Change System Password

System password(default) is being set as 12345678. System password can be set from 1-8 digit number. If system password is being set as 00001234,user only needs to enter 1234 and press #. However,in order to change system password,user is required to enter all 8-digit system password.



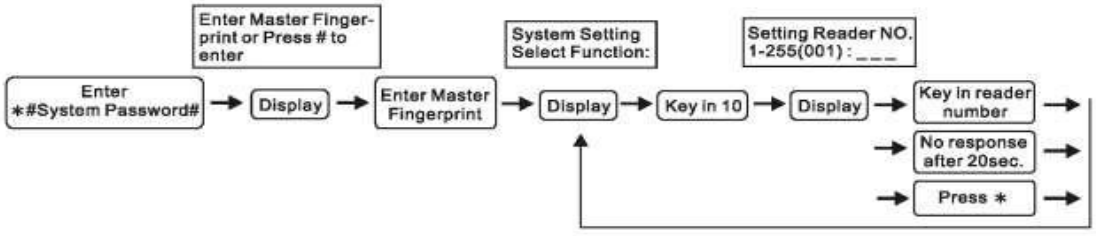
3.9 Activate Anti-Duress

The last fingerprint enrolled is set as anti-duress fingerprint when this function is activated. For example,if A enrolled two fingerprints, the first fingerprint is set as door-open used and the second fingerprint is set as anti-duress fingerprint. It is suggested to enroll three fingerprints as the first two fingerprints are set as door-open used and last one is to activate anti-duress alarm.



3.10 Setting Reader Number

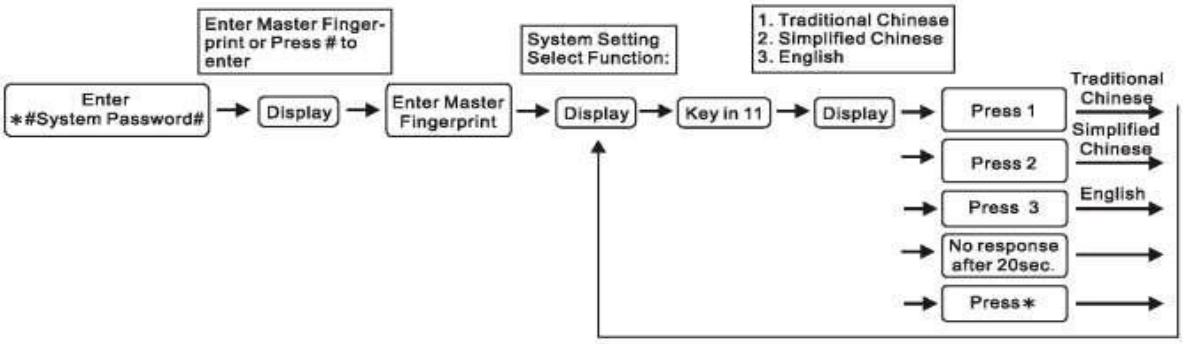
Setting reader number for every reader. Reader can be set from 1-255 (do not repeat the number) and it is being set at 1 as default.



3.11 Language

There are Traditional Chinese,Simplified Chinese and English to select.

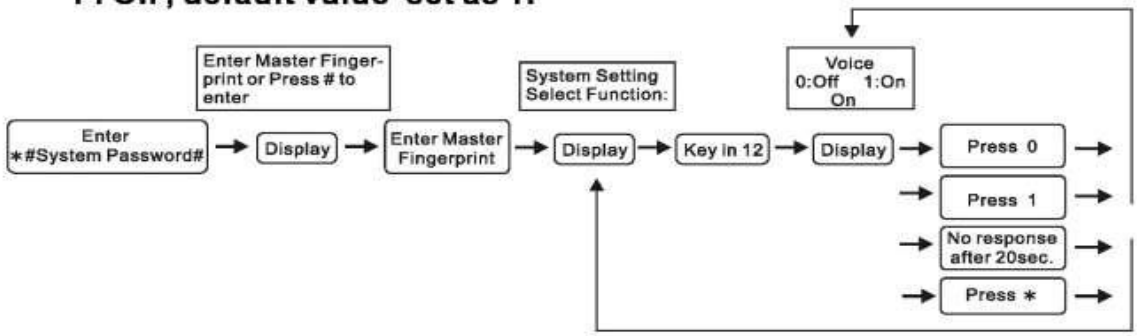
Please note : This function may need compatible software as the user names will not be able to display.



3.12 Voice (Optional)

0 : Off ,

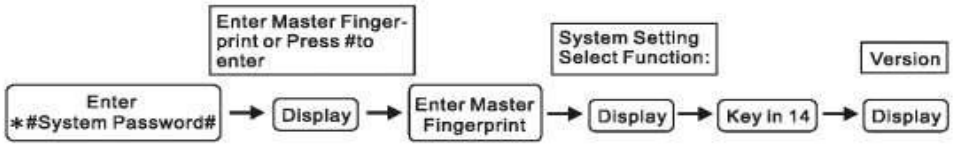
1 : On , default value set as 1.



3.13 Version (Optional)

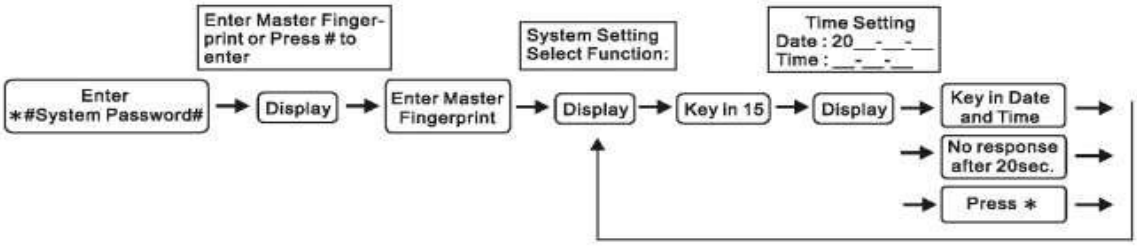
0 : Off ,

1 : On , default value set as 1.



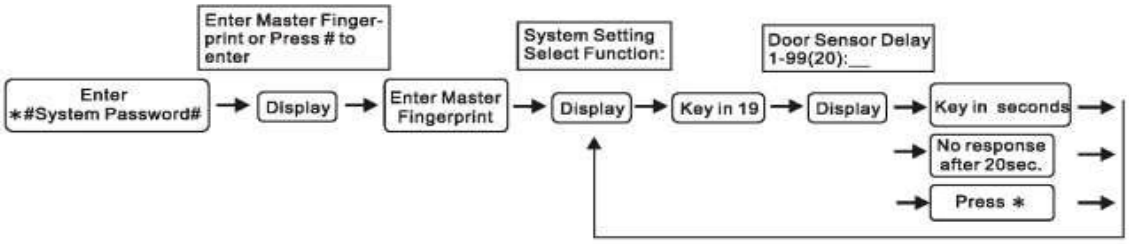
3.14 Time Setting

Setting date and time. Press * to clear or press and hold ∗ to clear all date and time settings. When no response from user after 20 seconds ,it will go back to main selection.



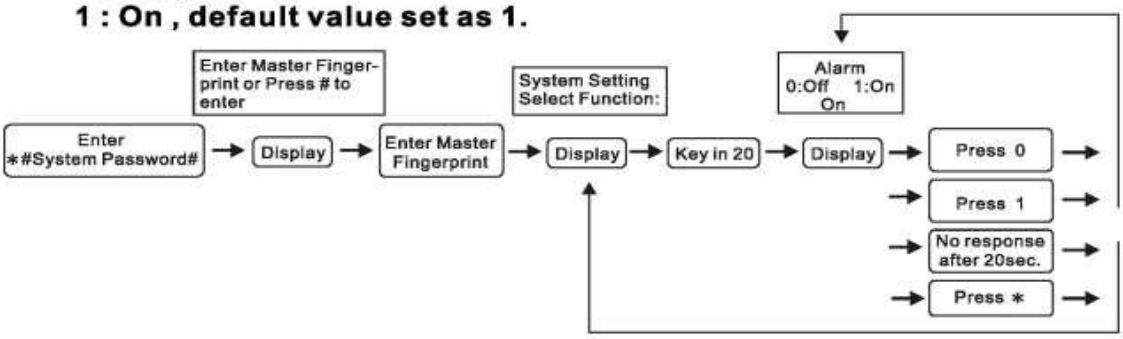
3.15 Door Sensor Delay

Default value is set as 20 seconds.
Please note : Time starts to count when OK light is on.



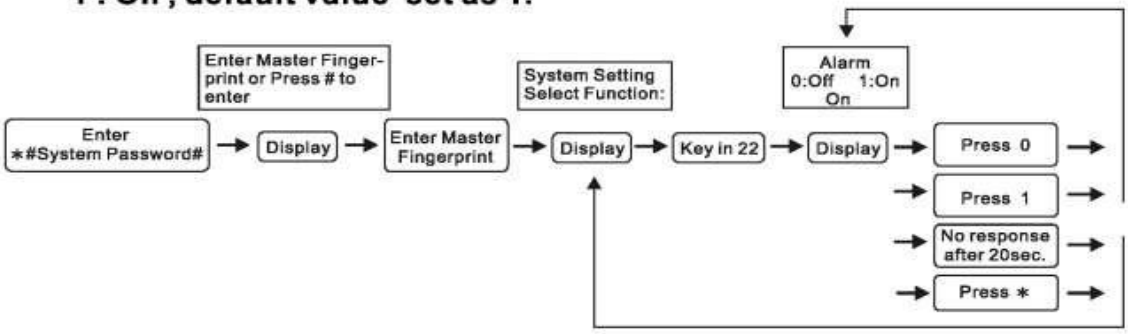
3.16 Alarm

0 : Off ,
1 : On , default value set as 1.



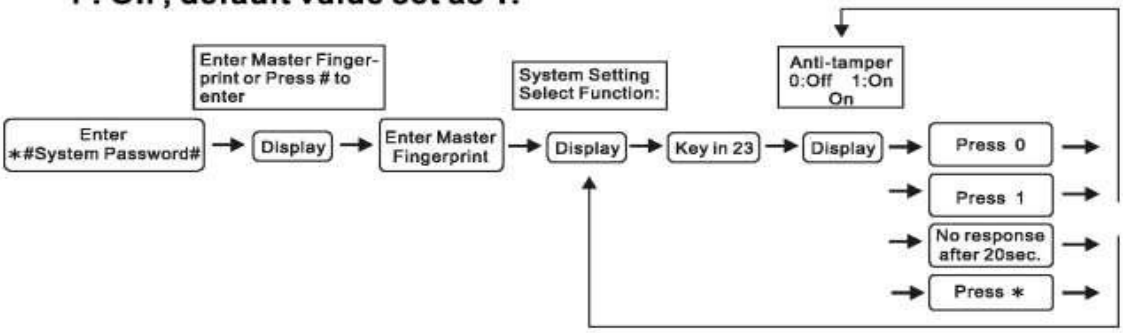
3.17 Door Sensor

0 : Off ,
1 : On , default value set as 1.



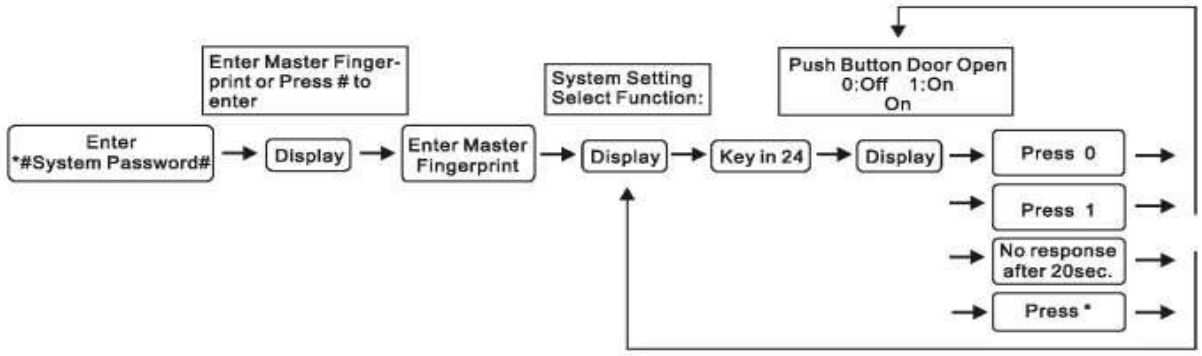
3.18 Anti-tamper

0 : Off ,
1 : On , default value set as 1.



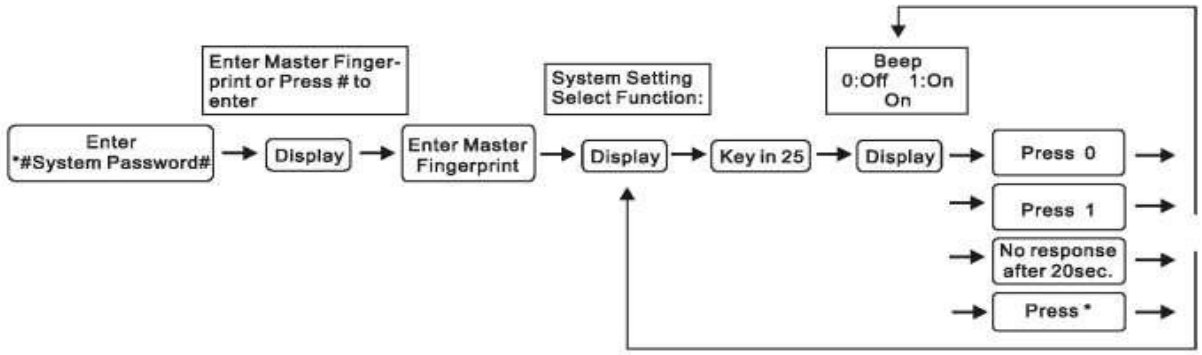
3.19 Push Button Door Open

Function 24, 0 : Off , 1 : On , default valut set as 1.

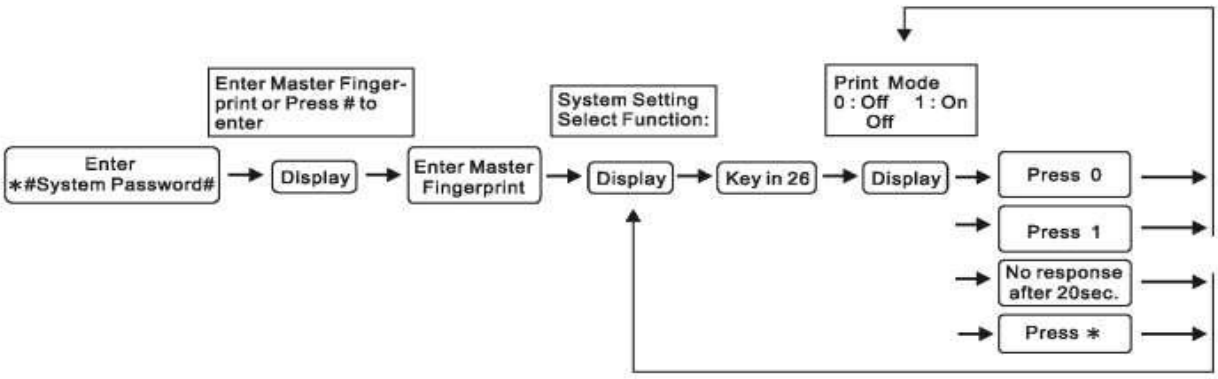


3.20 Beep

Function 25, 0 : Off , 1 : On , default valut set as 1.

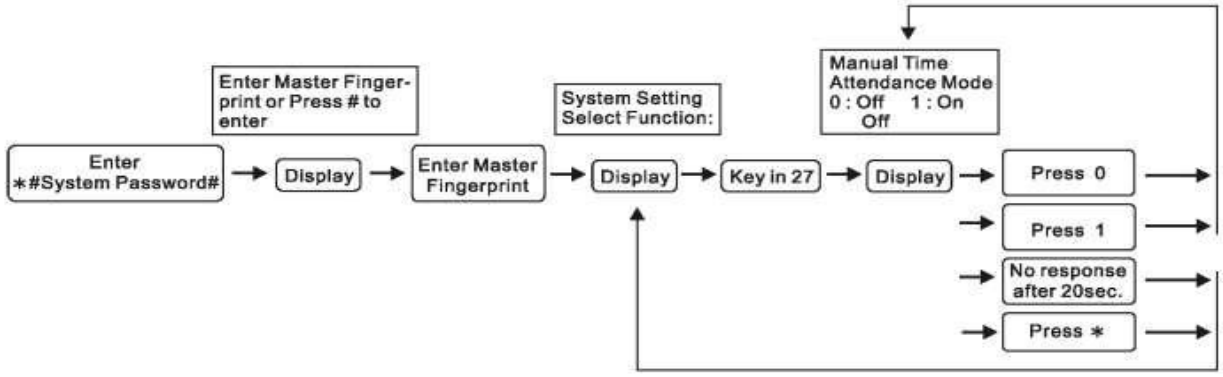


3.21 Print Mode



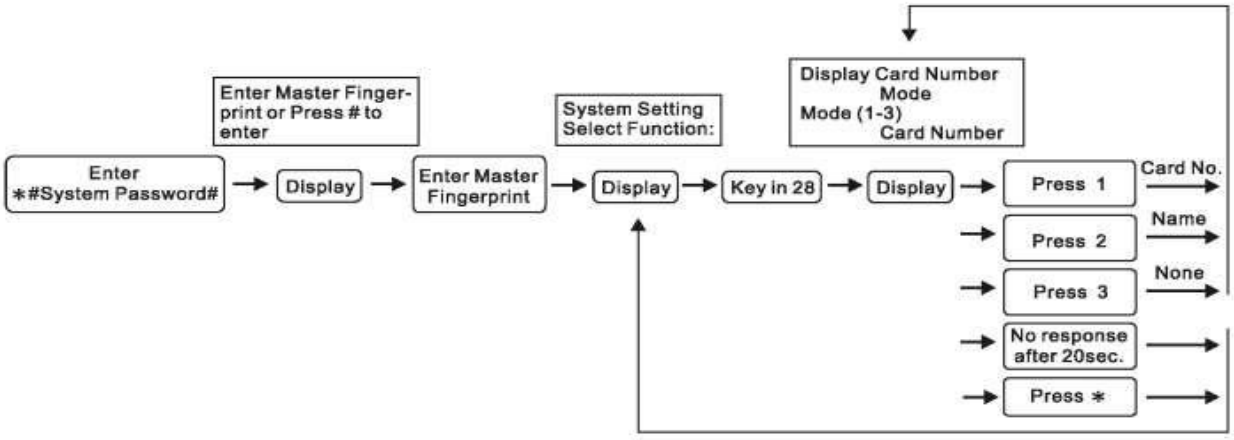
3.22 Manual Time Attendance Mode

0 : Off ,
1 : On , default value set as 1.

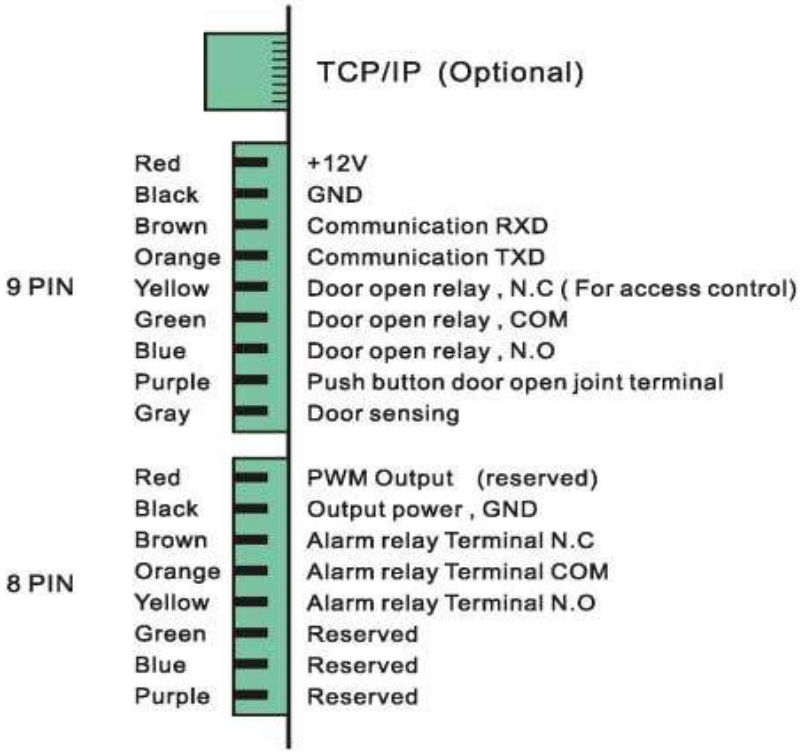


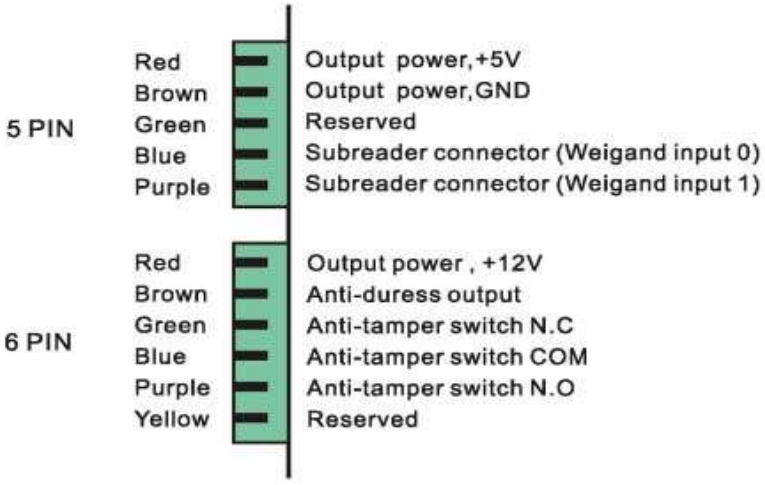
3.23 Display Card Number Mode

Default value set as 1.



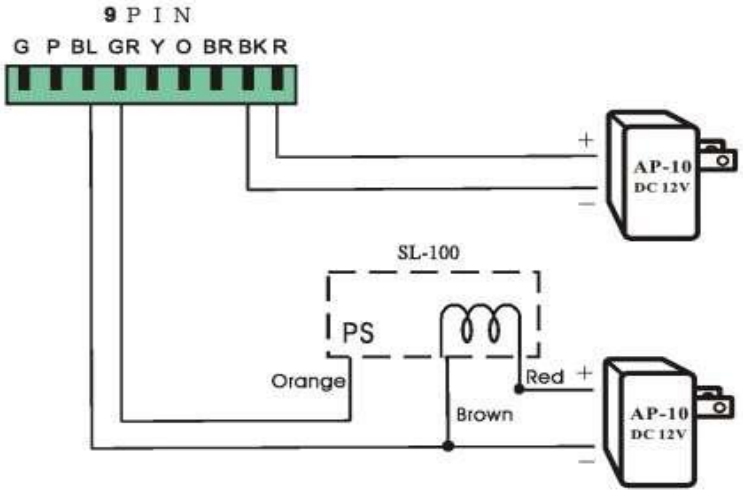
4、Reader installation instructions



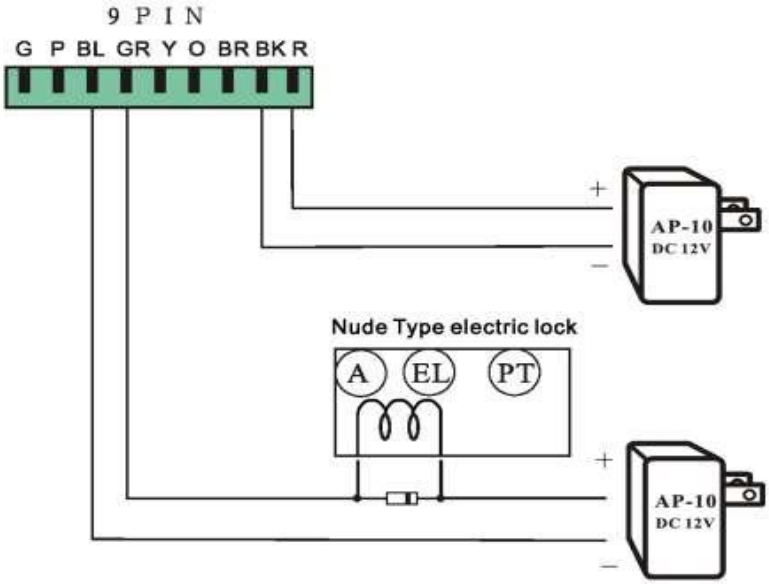


5. Wiring connection for additional electric lock and push button door open switch

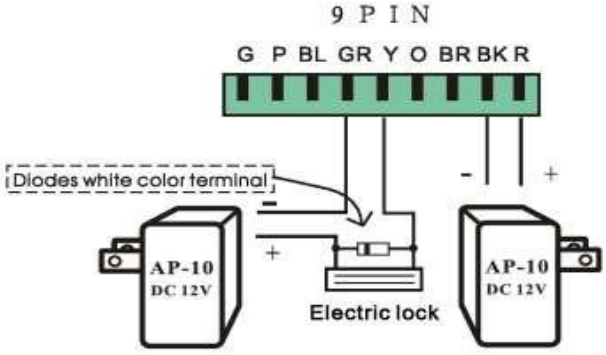
5.1. SOCA SL-100 Fail Secure



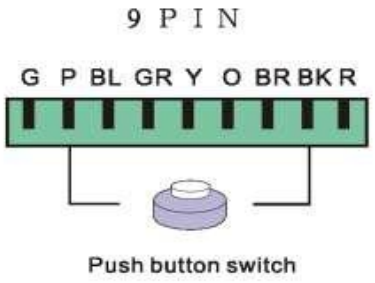
5.2. Fail Secure : Nude Type electric lock,automatic door and etc.



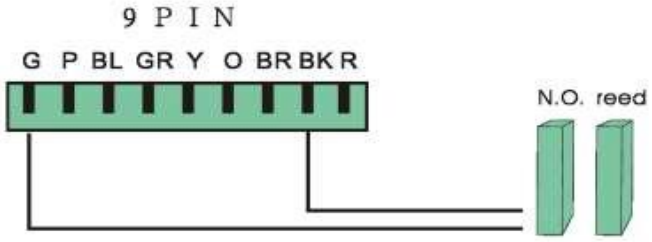
5.3. Fail Safe : Electromagnetic lock and etc.



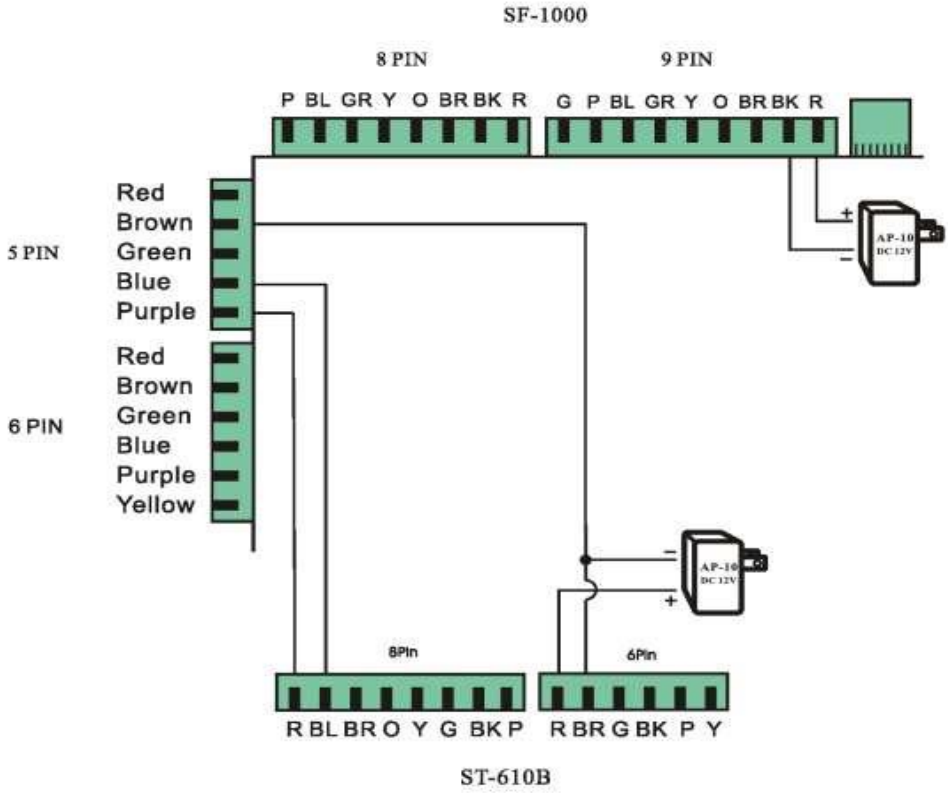
5.4. Wiring connect for open door button



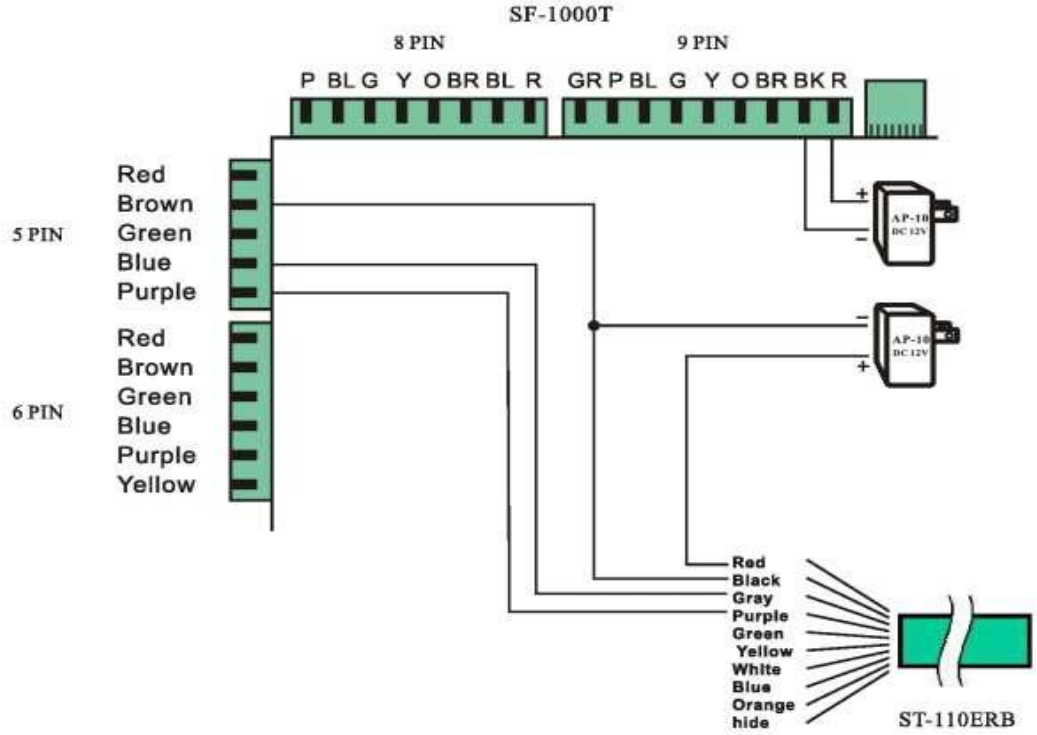
5.5 . Wiring connection for additional magnetic door sensing (Only support NO reed)



5.6. Wiring diagram of SF-1000 and ST-610B

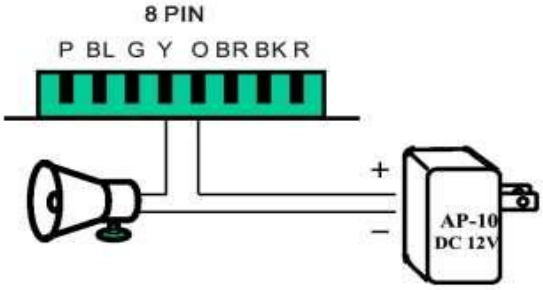


5.7. Wiring diagram of SF-1000 and ST-110ERB

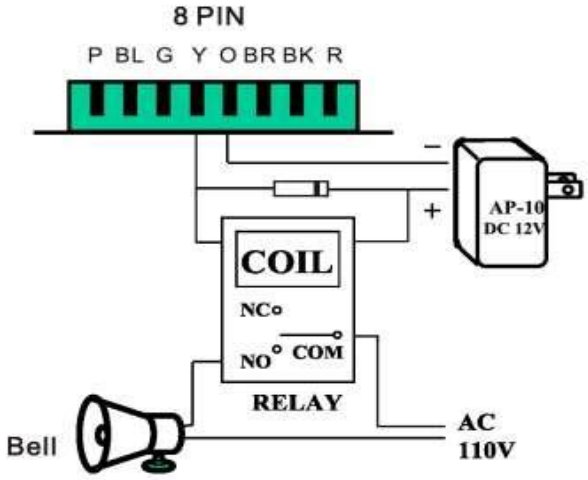


5.8. Wiring connection for additional alarm

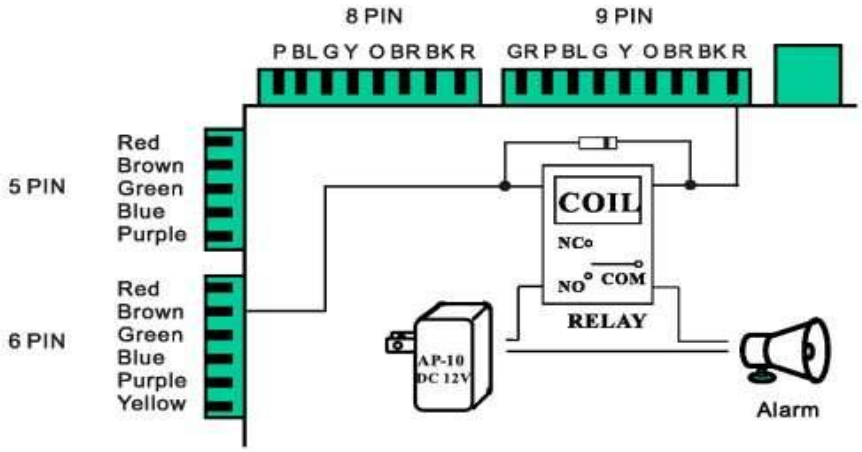
※ Power supply of alarm DC 12V



∗It is must to connect a RELAY when installing an additional bell which is above 110V.

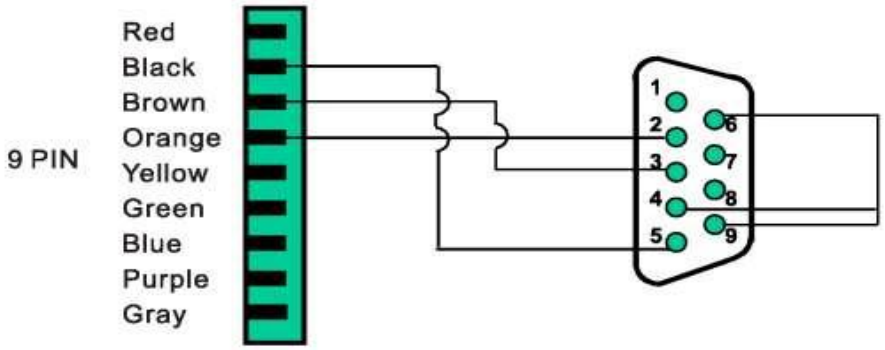


5.9. Wiring connection for additional alarm (Anti-duress output)

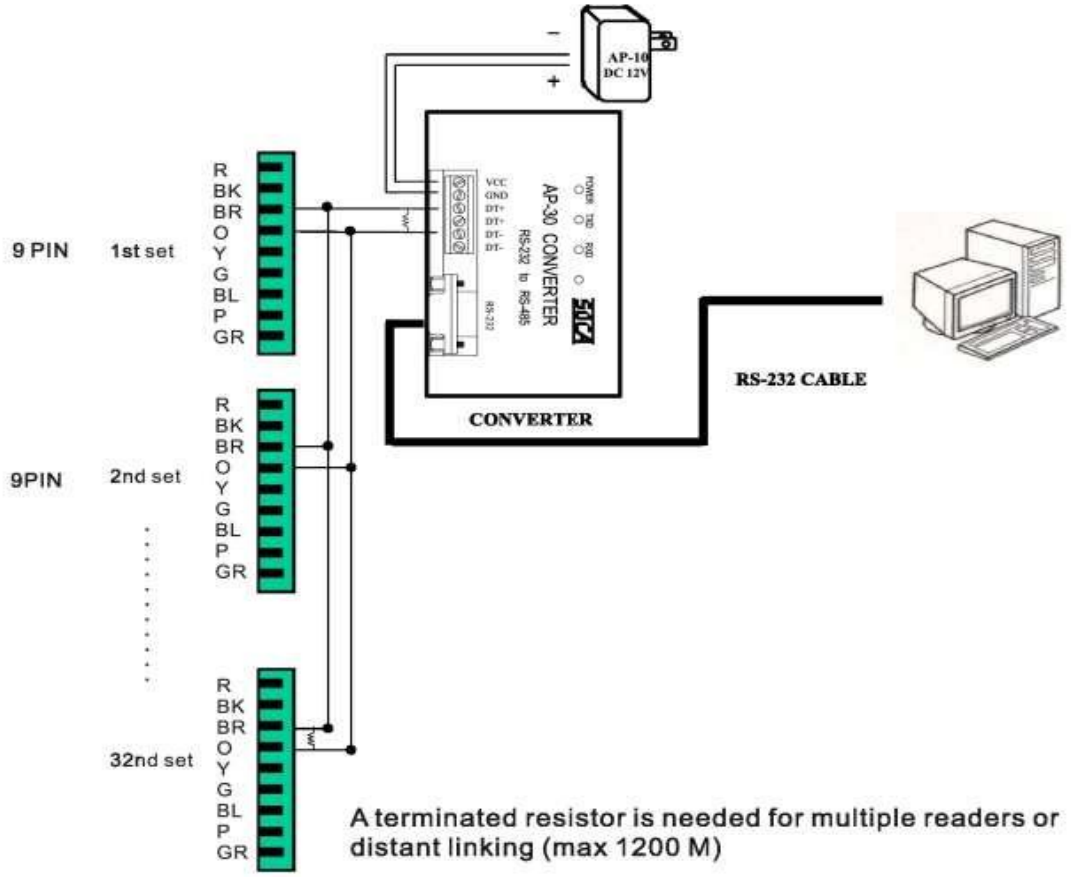


6. Wiring connection for linking with computer

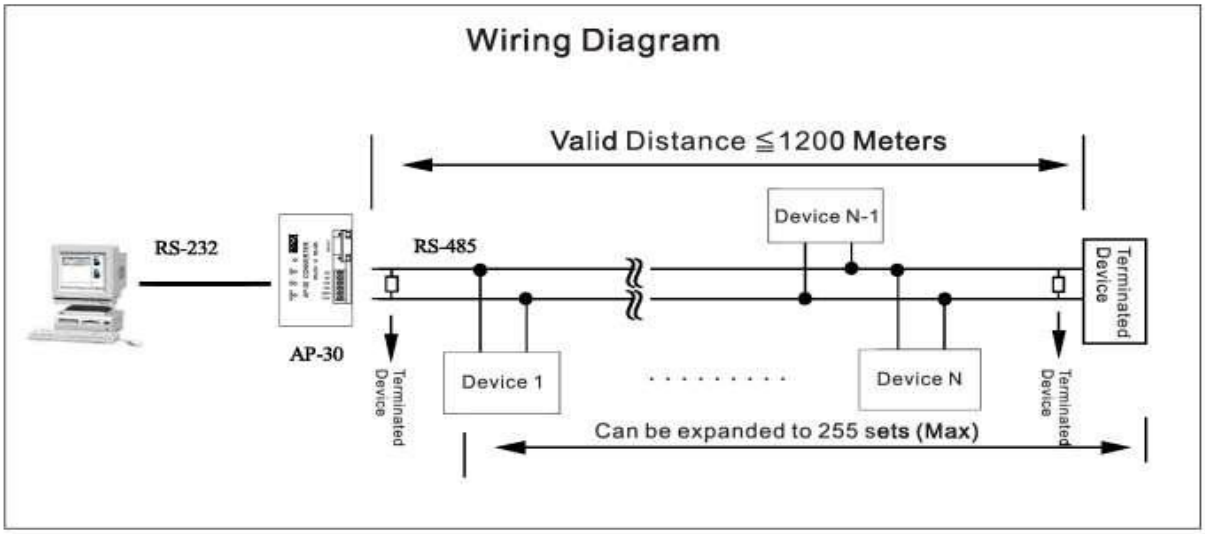
6.1 RS-232 (9 PIN connector)



6.2. Wiring connection for RS-485

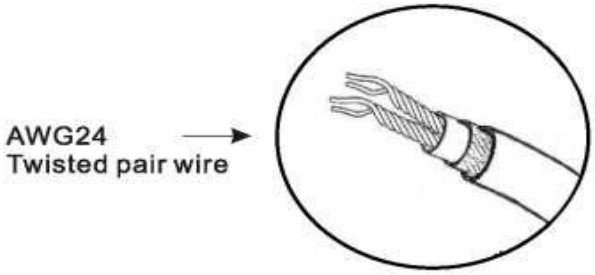


A terminated resistor is needed for multiple readers or distant linking (max 1200 M)

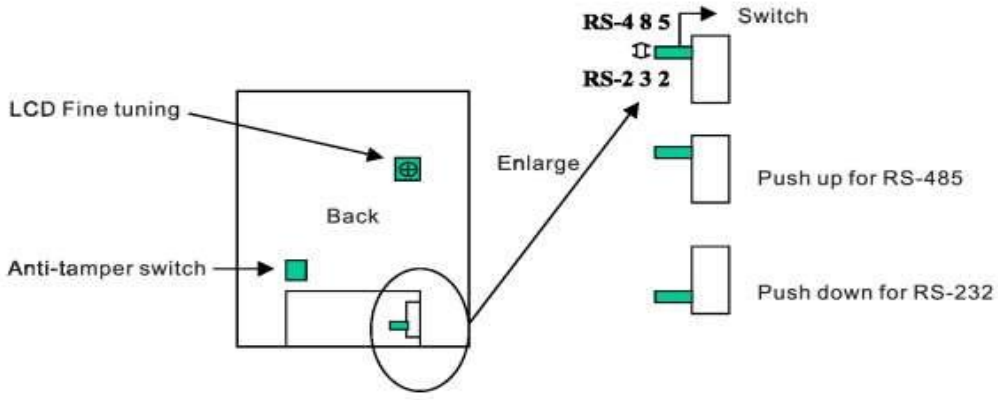


Please note :

*Twisted pair wire with shield (24 AWG and above) for Internet communication use.
*Using RS-232 to connect : Standard length is limited within 15m.
*Using RS-485 to connect :
Each terminal (RS-485) requires a resistor (330Ω) when both are parallel connected within 300 m.
Each terminal (RS-485) requires a resistor (220Ω) when both are parallel connected within 600 m.
Each terminal (RS-485) requires a resistor (110Ω) when both are parallel connected within 1.2 Km.
Note : The above values are for reference,please adjust according to the specific conditions.



6.3. Reader Back Panel

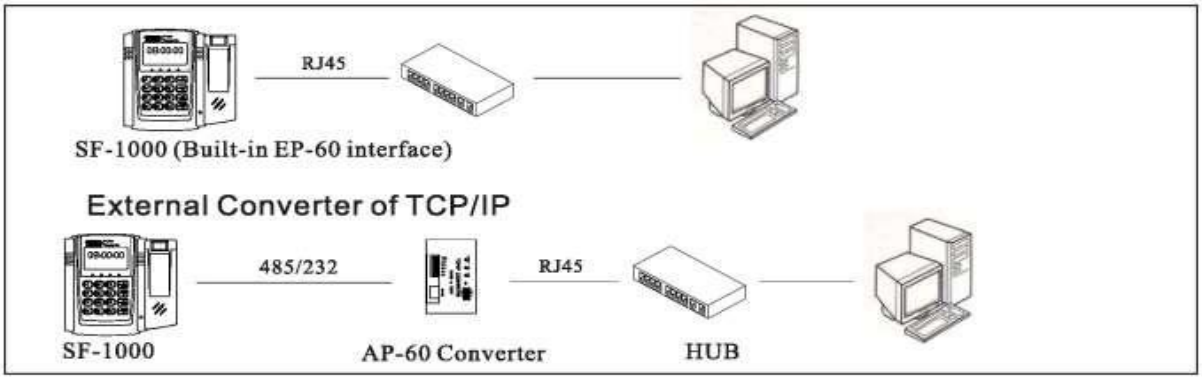


Please note : 1. All LCD has been tuned to its optimal luminance. Under normal circumstances, it does not need any adjustment.
2. If alarm light is on, please make sure anti-tamper switch behind the unit is being mounted properly against the wall or any other smooth surfaces. Click Alarm Off from the tool bar or use proximity card to turn the alarm off.

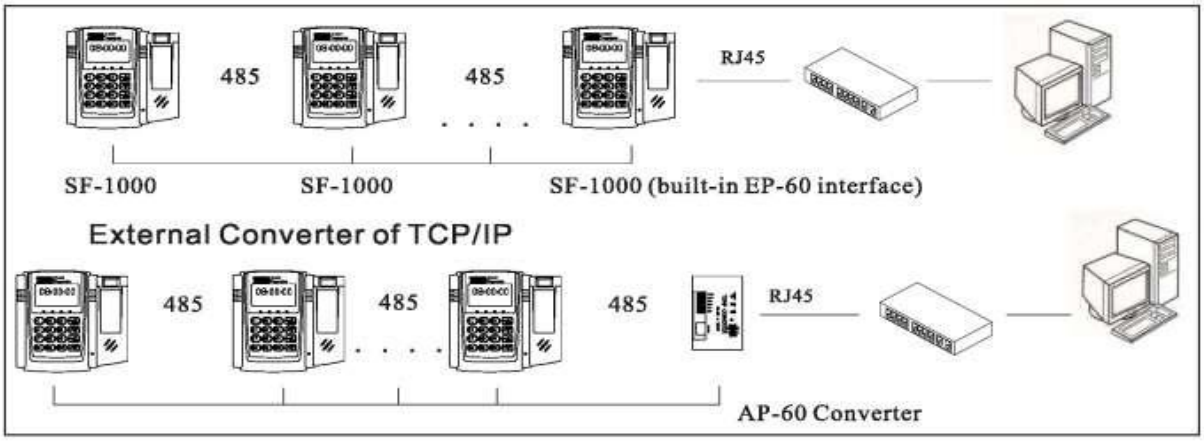
Appendix 1

Optional use of TCP/IP,Modem or USB interface for online purposes. The following connections as below:(Built-in module number of TCP/IP:EP-60, External box number of TCP/IP:AP-60)

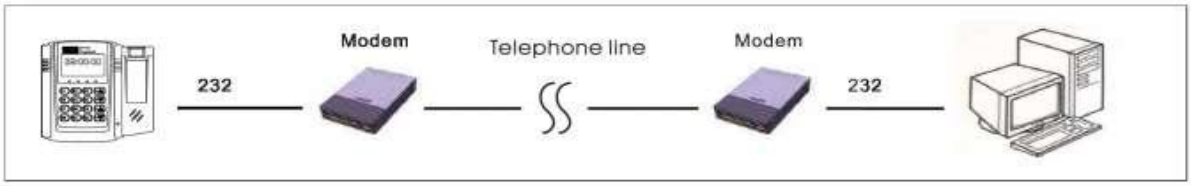
To connect with one unit



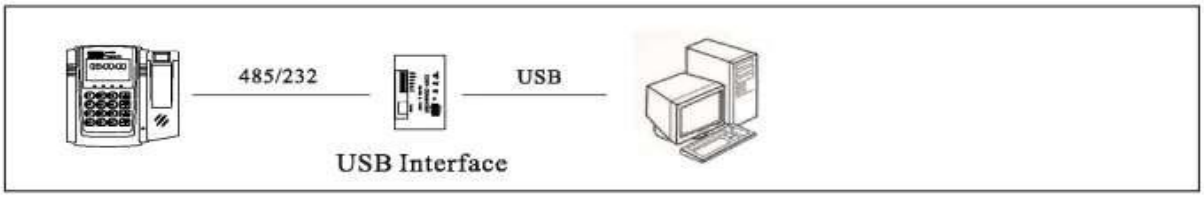
To connect with more than one unit



To connect with Modem Interface

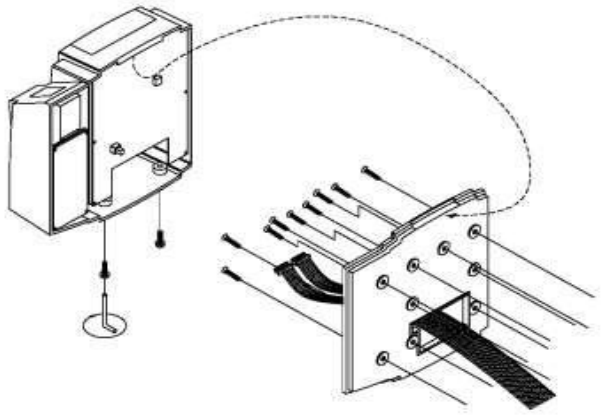


To connect with USB Interface



Appendix 2

Mounting of reader unit :



7、ATTENTIONS

1. **Confirm the power supply's voltage and polarity before installation to prevent any wrong connection that causes damage to the reader.**
2. **Use separate power supply to the electric lock and the proximity reader.**
3. **Do not install the reader nearby any metal equipments or detector area to prevent interference of read distance.**
4. **Do not try to fix or modify the reader without authorized electrician. The reader is guaranteed for one year.**

8、Troubleshooting

1. Fingerprint has no reaction with proximity card.

Solution :

(1) Please check the power supply (12V @ 500mA and above) and power light of the unit.

(2) Please check the format or the condition of the card for proximity.

(3) Continuous proximity. Please remove the card from the proximity range and try again.

(4) Please install the unit at different direction or places when there are more than one unit installed nearby which eventually may cause disturbance of proximity or other electric wave interference occurred.

(5) Do not install the unit on any metal surface which may reduce the range of proximity.

2. Unable to link with computer.

Solution :

(1) Please check the connection between the unit and the computer.

(2) Please check the polarity of the line.

(3) Please check if RS-485 is being switched on and operated in normal state.

(4) Please make sure both unit and com port have the same Baud rate.

(5) Please check the switch of RS-485 and RS-232.

(6) Please make sure no repetition of unit number when more than one unit is installed.

3. No response from access control.

Solution :

(1) DENY light will flash when unregistered card is used. Use a valid card for proximity.

(2) Please check the wiring of the electric lock.(Please refer to P12)

(3) Check if any short cireuit in the wiring connection of lock and reader.

4. Turning Anti-tamper alarm off

Solution :

(1) Click Anti-tamper Alarm off in Setting Mode.

(2) Place or mount the unit back properly and use proximity card to turn the alarm off.

Setting fingerprint sensor parameter manually. (Please seek professional assistance and do not simply change the default value of the unit)

Do not simply change the default value without any professional assistance.

Function30 : **Autotuning Optic unit to adjust its brightness and gain value automatically which is used for high contrast of brightness outdoors,or low temperature in winter.**

Function 31 : **Brightness setting.Adjusting brightness range is 16~1000.Lower the value when light is strong.Adjusting to higher value when light is dim. Lower the value when humidity is higher or with wet finger.Adjusting to higher value when humidity is low. Fingerprint traits will become too dark to identify when the value is set too high with wet finger.Default value as 200.**

Function 32 : **Adjusting gain value range is 0~63. It is suggested do not adjust the default value 40.**

Function33 : **Security levels as 1:1(Seculevel) or 1:N(Seculevel). 1 represents the lowest security level and 9 represents the highest security level. The default value of 1:1 is set as 5. The default value of 1:N is set as 3. It is suggested to set the value as 5 for access control and 3-4 for time and attendance.**

Function34 : **Blinking process.1 represents multiple blinking process and it is set as high security level and lower speed which is suitable for access control ;0 represents single blinking process and it is set as lower security level and higher speed which suitable for time and attendance.**

Function36 : **Contrast. This function is only available for version 1.2 and none for any versions of 2.0 and above.**

Function 37 : **SMARTCAPTURE,Smartcapture will disable function 31 and function 32 as it will capture the fingerprints according to the external environment. It is suggested to use this functionat the environment which changes a lot (humidity or temperature) or unclear fingerprint traits.It is not suggested to use it at places with dim light.**

Function 38 : **Register quality.Adjusting value is 30~100 and default value is 40.The higher the value the higher the security level to identify the registered fingerprint quality.Therefore,if will cause higher fail rate to identify fingerprints.**

Function 39 : **1:1 Verifing quality.Adjust value is 10~100.The value is able to function during 1:1 which to reinforce 1:1 security level.**

Note : ① 1:1 matching requires user to enter fingerprint code to match with itsfeature file.

② 1:N matching scans and matches user's fingerprint with all the registered fingerprints automatically.