Multi-Bio Series Installation Guide
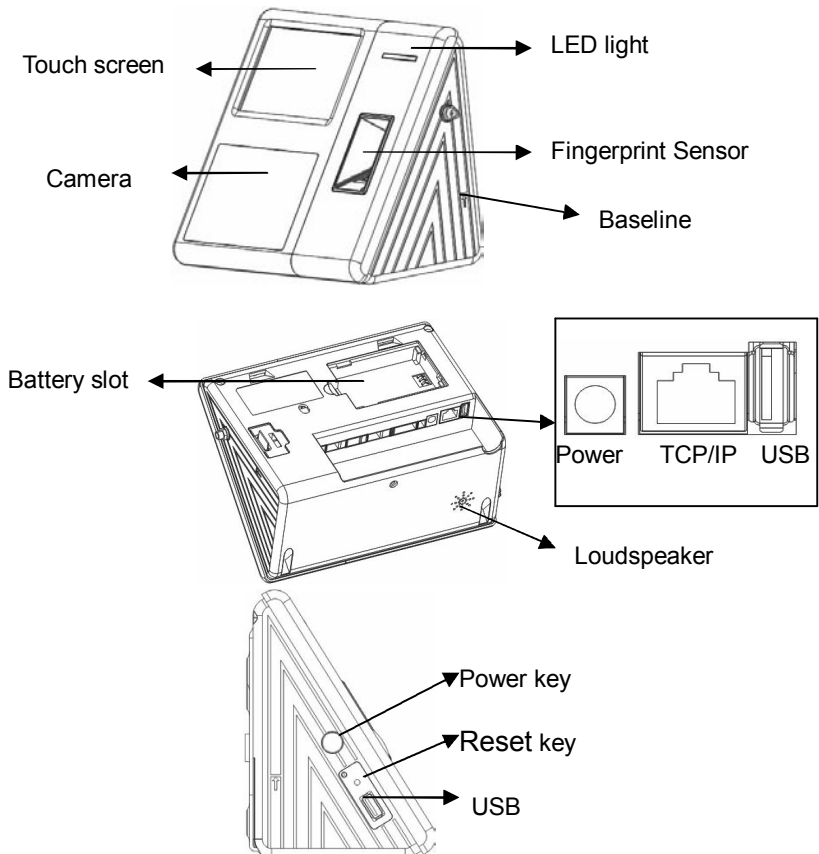
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Date：Sep 2009

About this Guide

This guide provides actual installation instructions only. For information regarding user instructions, please refer to "iFace Series User Manual".
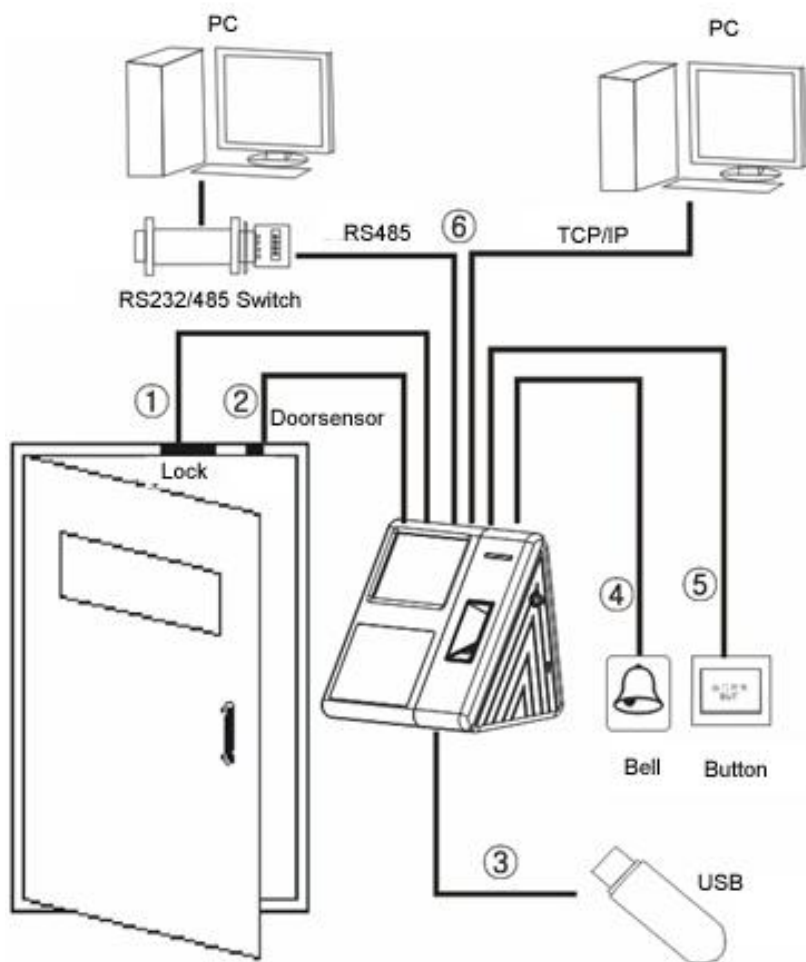
Content

1 System Configuration

1.1 View of operation panel

Touch screen

LED light

Camera

Fingerprint Sensor

Baseline

Battery slot

Power TCP/IP USB

Loudspeaker

Power key

Reset key

USB

1.2 The illustration of system construction
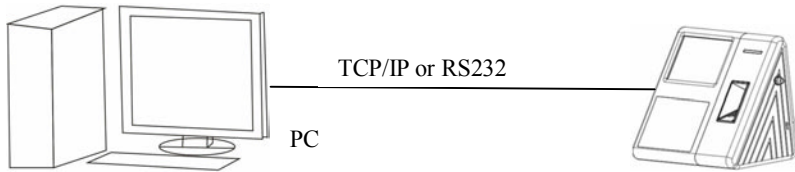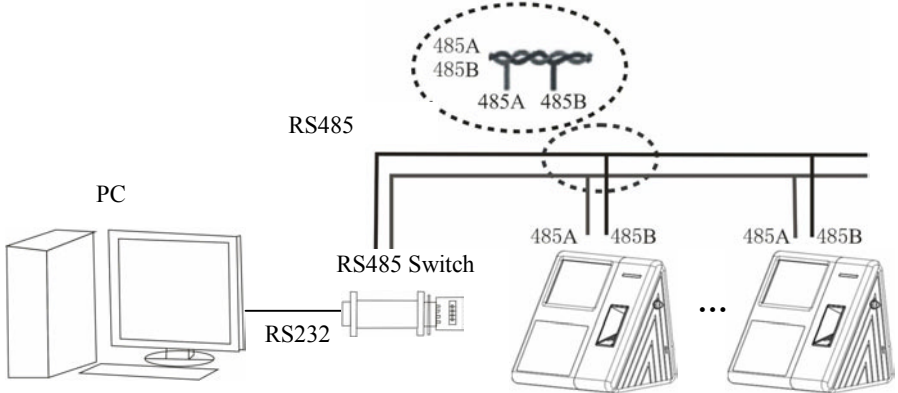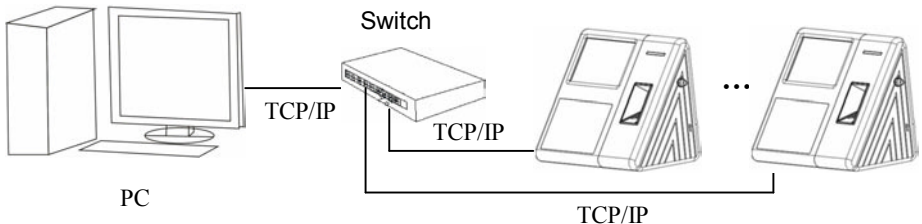
1.3 The sketch map of communication

1 Fingerprint machine directly connects with PC through RS232 or TCP/IP.

TCP/IP or RS232

PC

2 Fingerprint machine connects with PC through RS485 network.

485A
485B

485A 485B

RS485

PC

485A 485B

485A 485B

RS485 Switch

RS232

...

3 Fingerprint machine connects with PC through TCP/IP network.

Switch

TCP/IP

TCP/IP

...

PC

TCP/IP

2 Installation

Caution: Do not to connect peripheral equipment before the power of the device is cut down, otherwise it is possible to damage the device badly.

Please follow instruction to connect peripheral equipment。

① Door sensor connection (Sensor, GND)

② Exit-button connection (Button ,GND)

③ Alarm connection (NC2,COM2,NO2)

④ Door lock connection (NC1,COM1,NO1)

⑤ Ethernet connection (RJ45-1, RJ45-2, RJ45-3,RJ45-6)

⑥ RS232 connection (232T,232R,GND)

⑦ RS485 connection (485A,485B)

⑧ Wiegand output connection (WD0,WD1,GND)

⑨ Power connection (+12V,GND)

Power   TCP/IP   USB
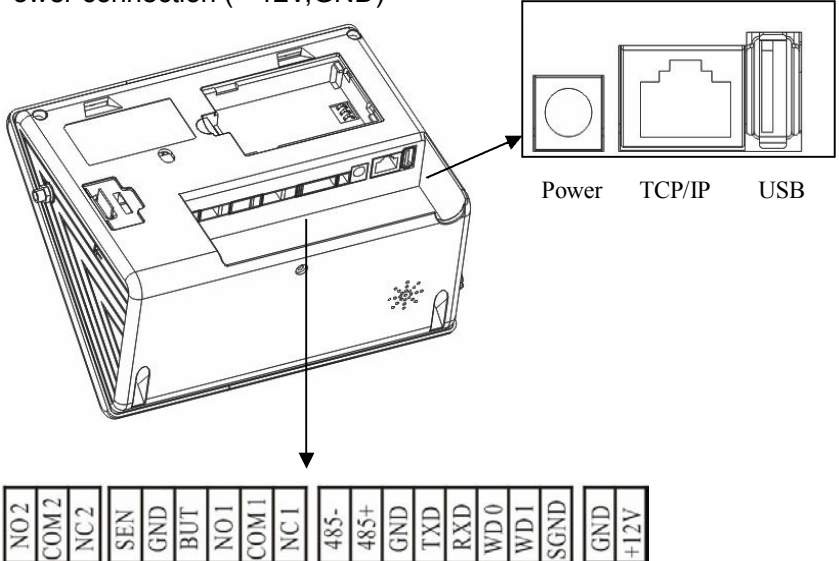
The definition of terminal connection ：

| From left to right			
1	NO2	Connect to Cable Bell NO terminal	Tie up together
2	COM 2	Connect to Cable Bell COM terminal	
3	NC2	Connect to Cable Bell NC terminal	
4	Sens or	Connect to Door sensor	Tie up together
5	GND	For Door sensor and release button	
6	Butto n	Connect to Release button	
7	NO1	Connect to Lock NC terminal	Tie up together
8	COM 1	Connect to Lock COM terminal	
9	NC1	Connect to Lock NO terminal	
10	485-	Connect to RS485B	Tie up together
11	485+	Connect to RS485A	
12	GND	Connect to RS232 and Weigand GND	Tie up together
13	TXD	Connect to RS232 TXD	
14	RXD	Connect to RS232 RXD	
15	WD0	Connect to Weigand outWD0	Tie up together
16	WD1	Connect to Weigand outWD1	
17	SGN D	Connect to screen wire	
18	GND	Connect to Power GND	Tie up together
19	+12V	Connect to Power +12v	

2.1 Door sensor connection

The door sensor is used to detect the door open-close state , terminal can monitor if the door has been unauthorized open through the door sensor, at this time it can output a alarm signal, moreover, terminal can trigger prompt warning if the door is not close tightly.

2.2 Exit-button connection

The exit-button is installed for in-door operation. When the switch of the button is close, the door will open. The distance is approximately 1400mm from ground to exit-button bottom.   Make sure that the exit-button position is to align correct, upright and the connection is accurate and reliable. (Unused exposed end of cable should be cut off, and use insulating tape to wrap it.)Pay attention to electromagnetic disturbance. (For example: The light switch, the computer and so on)
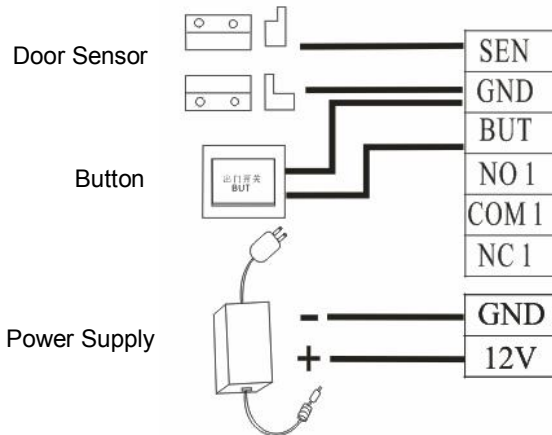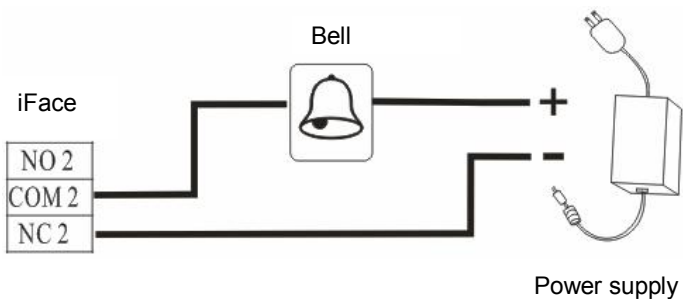
2.3 Time Ring connection

Connect the electrical bell to the fingerprint machine, when arrive the appoint time, the fingerprint machine will send signal to trigger relay。The terminal supports both Normal-Open bells and Normal-Close bells at the same time.

①Normal-Open bells
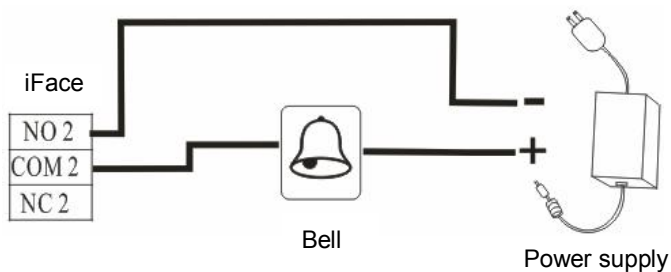
②Normal-Close bells

2.4 Door lock connection

The way of installing door lock depends on the type of lock and local condition. Internal resistor which comes from long distance transfer should be taken into consideration when selecting the cable of electric power. The door lock should be installed reliable and stable .Ensure the wiring is correct. For the strike lock and electromagnetic lock, you should pay attention to positive and negative terminal connection. The unused bare end of wire should be cut off and use insulating tape to wrap it. The delay time of strike lock is adjustable according to different conditions.

Select electric lock : it is better to use strike lock for the two –direction opening glass door (both open to inside or outside direction) ,for the single opening wood door in company internal , we recommend to use magnetic lock, the magnetic lock also be called as electric magnetic lock,. The magnetic lock is more reliable than the strike lock, but the strike lock is much safer than the magnetic lock. In the small living community, it is better to use strike lock and magnetic force lock. The electric control lock gives out higher noise; the electric control lock is commonly used to building communication. Now there is a soundless electric control lock which is able to be applied. Please pay attention, the lock is made of iron and easy rust, so you must beware of not exposing it to water or harsh condition, there are some other electric locks available, we don't recommend you to use them.

Connect with electric lock

The Normal-Open lock is open when the power is on. The Normal-Close lock is closed when power is on. The machine

supports both of the two kinds of locks at the same time. The way of lock connection changes with the type of lock. For NO lock, the NO terminal will be used; for NC lock, the NC terminal will be used.

This access control machine is powered by DC12V and work current 400mA. If the lock work electric power is DC12V and the work current is less than 1000mA, the fingerprint machine and lock are able to be powered by one adapter together, please refer to table 1, 2.

In the following three cases, we recommend that fingerprint machine and lock are powered separately.
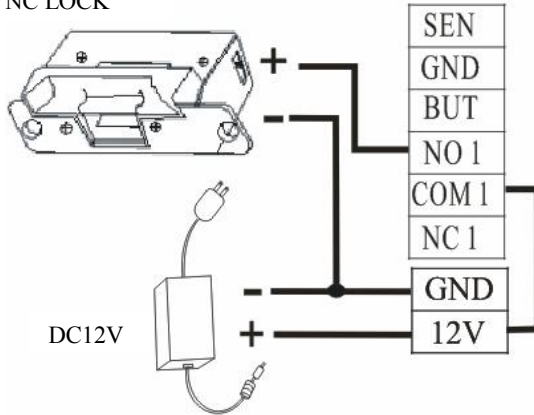
1)The working voltage of the lock is DC12V, but the current difference of the fingerprint machine and the lock doesn't exceed 1A.

2) The lock voltage is not DC12V.

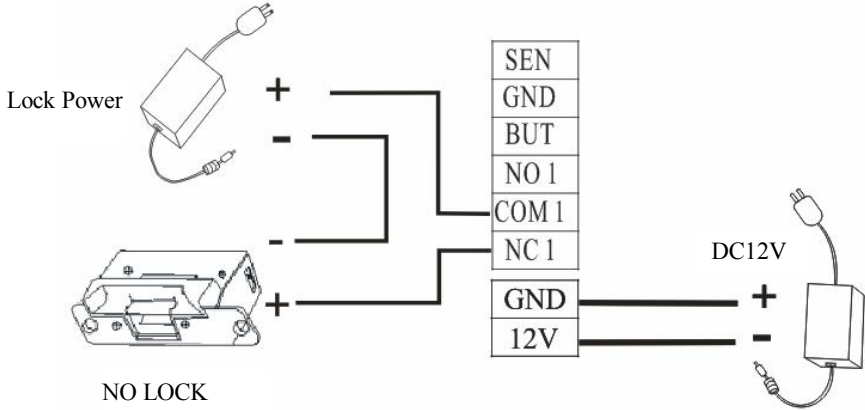3) The distance between lock and fingerprint machine is too far.
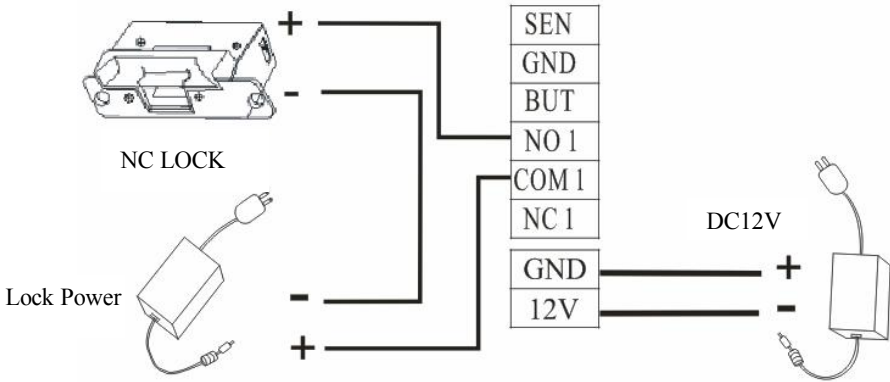
NO LOCK

DC12V
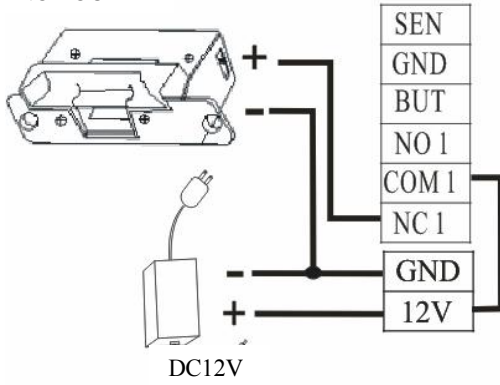
Picture1 Power by one supply

NC LOCK

DC12V

Picture2 power by one supply

Picture 3 The terminal and lock powered by independent adapters

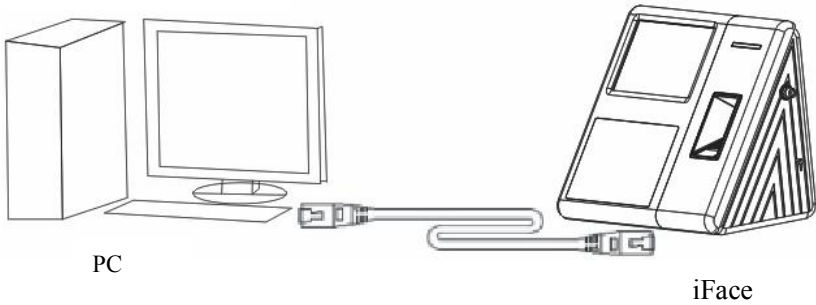**Picture 4** The terminal and lock powered by independent adapters

2.5 Ethernet connection
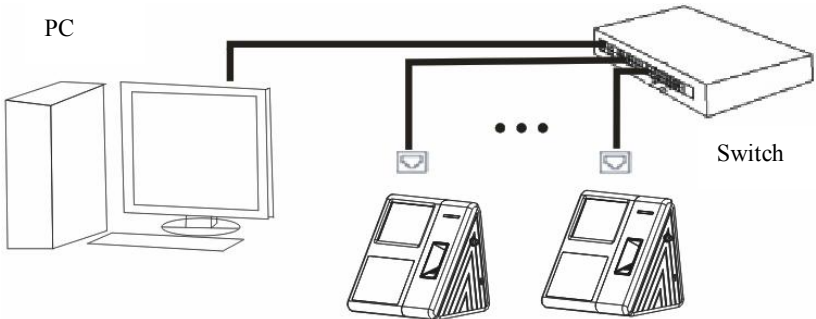
The terminal provide two ways connect Ethernet.

1）The terminal connect with PC through cross cable。

IP：192.168.1.100
Sub Mask：255.255.255.0

IP：192.168.1.101
Mask：255.255.255.0

PC

iFace

2）The terminal connect with PC through network and HUB to create a local network。

PC

Switch

2.6 RS232 connection

The terminal connect with PC through RS232

Note：Don't upload or download facial module through RS232, because the large data will effect the transfer speed.

iFace

PC Serial Port

485-
485+
GND
TXD
RXD
WD 0
WD 1
SGND
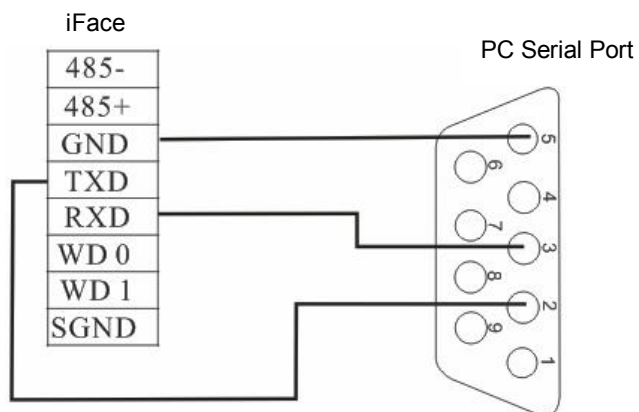
2.7 RS485 connection

The terminal connect with PC through RS485

Note：Don't upload or download facial module through RS485 because the large data will effect the transfer speed.
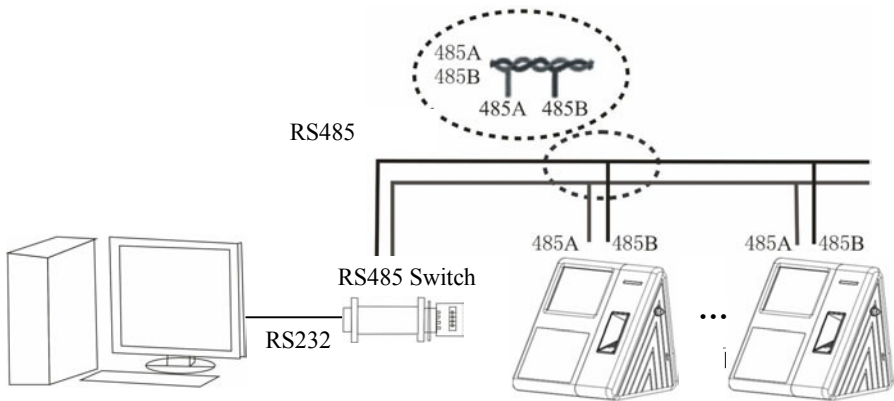
2.8 Wiegand Output Connection

The device has Wiegand output function, can connect the majority access
 controllers on the market, at this time it is used as a reader

Note：

1）The distance between device and access controller or card reader
shouldn't be over 90 meters (If a longer distance is needed or there is
interference in using environment, please use Wiegand signal de lay.).

2) To ensure the stability of the Wiegand signal, the device must share the
GND with controller or Weigand reader.

3) If the distance of Wiegand output or 485 communication is over 90 meters,
in order to reduce the interference caused by the long distance, it is
suggested to use the cable with shield and connect the shield cable to the
SGND terminal.
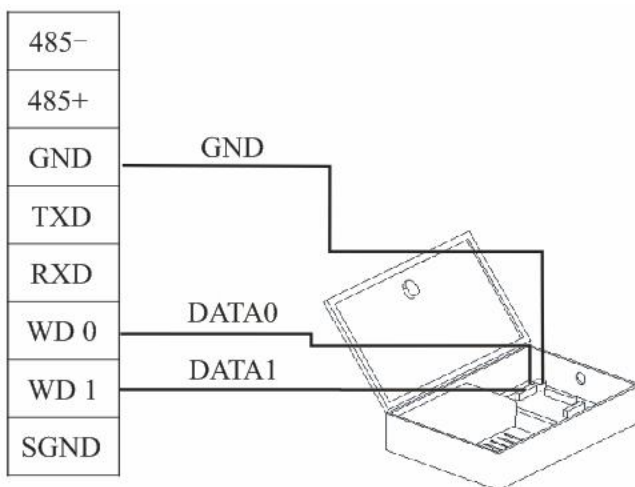
2.9 Power Connection

The device's working voltage is DC12V,，with working current 500mA, standby current 50mA . has provided two ways to connect power, please select one referring to the actual.

1．Terminal connection, Make sure the connection as the diagram(**Don't connect the poles in reverse.**).

2．Slot connection :Insert the plug of DC12V adapter into the power slot directly.

Power Slot

GND
+12V

DC12V

DC 12V
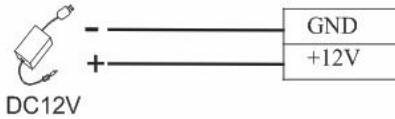
Terminal connection
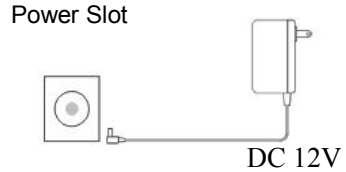
Slot connection

3. Others

3.1 Reset

Due to operation error or other accidence, which leads the machine not to work, you can restart machine through reset key。

① take a small tool which diameter is no more than 2mm。

② find reset mark of "res" on the left small hole on the bottom of device, see following figure。

③Use the tool plug into the hole refer to the picture on right , then plug out. The machine is able to restar。

Reset
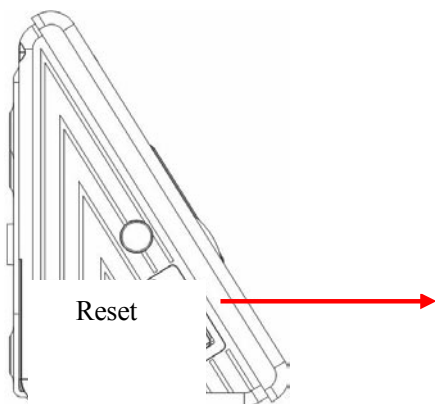
3.2 Anti-dismantle button

Anti-dismantle button is on middle of device, whose function is

realized by back-cover pressing the anti-dismantle button. When the device is being dismantled, it will send a alarm signal through the terminal.

Anti-dismantle button
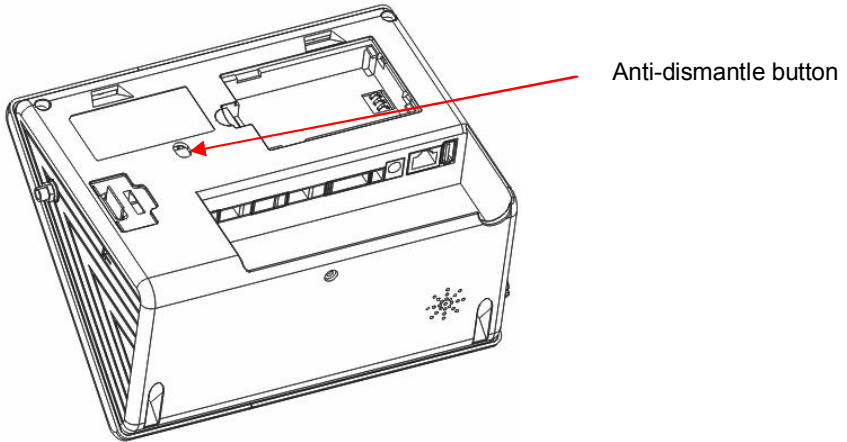
3.3 U flash disk using

① there is a mini-port of USB, please see figure circle on the left。

② USB can be used to upload and download data by U disk,。

USB Port
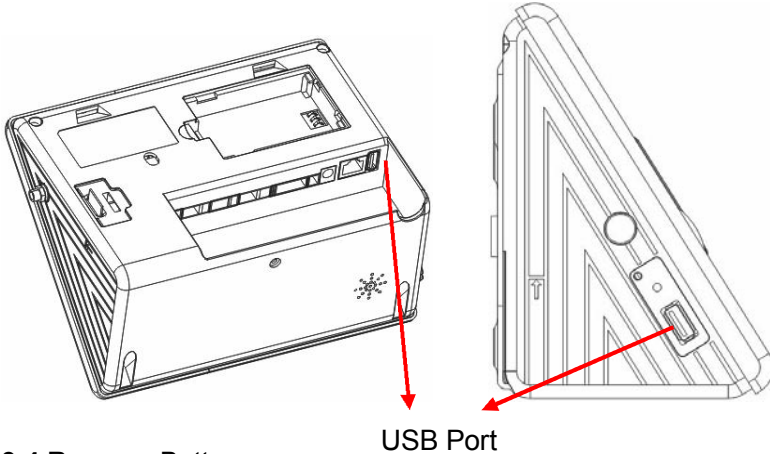
3.4 Reserve Battery

Work principle

Before use, make sure the reserve battery is installed properly. Whenever use power supply or reserve battery, you need press power key to turn on the terminal. In normal state, When the power cut down, the reserve battery will switch into discharge state to power on the terminal, In power off state, when the power cut down, the reserve battery will not switch into discharge state to power on .If you want to power on the terminal , you need press power key to turn on the terminal.

Battery slot

Power key
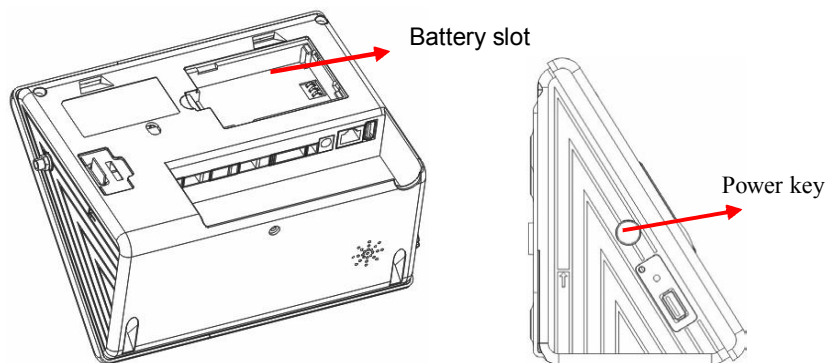
Technical parameter：

Charge time	Less than 4 H	Discharge time	More then 5.5 H
Working environment	0℃～50℃	Relative humidity	10％～90％
Storing environment	Please store the battery when the discharge capacity is full.,and the environment is 20℃±5℃。		
Cycle age	Cycle times of charge and discharge≥300 times		

Notice：

There is a danger of battery exploding, leak, fever, fire, break, if you don't read the notice carefully.

⚠︎   Do Not use it over 50℃；

⚠︎   Do Not inverse polarity connection；

⚠︎   Do Not put the battery into water or let it to get wet；

⚠︎   Do Not use and store battery near heat-generating machine (such as fire or heater)；

⚠ Do Not throw batteries into fire or hot battery；

⚠ Do Not use wire or other metal short the positive and negative terminal.