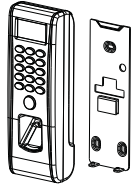
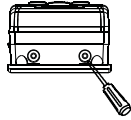


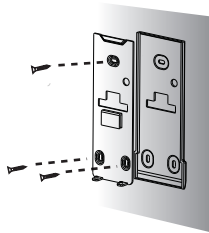
Black&White Screen Standalone Access Controller and Reader Installation Guide

Version:1.2 Date: Nov. 2012

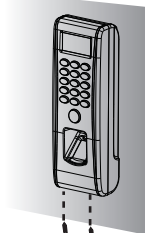
1. Equipment Installation



- Paste the mounting template on the wall. Drill the holes according to the marks on the template (holes for screws and wiring).
- Remove the screws on the bottom of device.
- Take away the back plate.

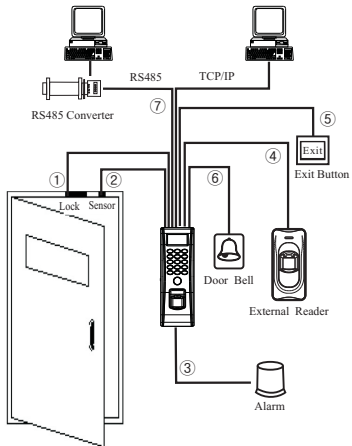


- Fix the rubber pad and the back plate on the wall according to the mounting paper.



- Place the unit onto the mounting bracket, and tighten the screws at the bottom of the unit.

2. Structure and Function



Access Control System Function

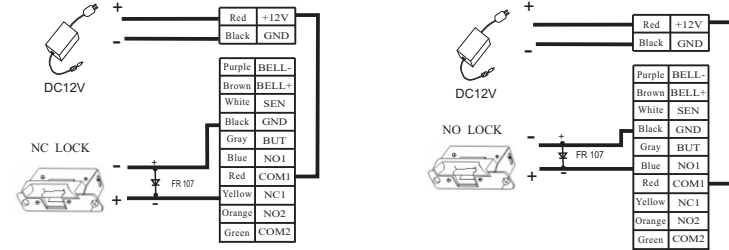
- If a registered user verified, the device will send a signal to unlock the door.
- The door sensor will detect the ON-OFF state. If the door is unexpectedly opened or improperly closed, the alarm signal (digital value) will be triggered.
- If the device is illegally removed, the device will signal the alarm.
- External card reader is supported.
- External exit button is supported.
- External door bell is supported.
- Supports RS485, TCP/IP communication to be able to connect with a PC. One PC can manage multiple devices.

* Reserves the final rights of modification and interpretation by our company.

3. Lock Connection

- The system supports NO lock and NC lock. For example the NO lock (normally open at power on) is connected with "NO" and "COM" terminals, and the NC lock is connected with "NC" and "COM" terminals.
- When the electrical lock is connected to the Access Control System, you need to parallel one FR107 diode (equipped in the package) to prevent the self-inductance EMF affect the system. **NB: do not reverse the polarities!**

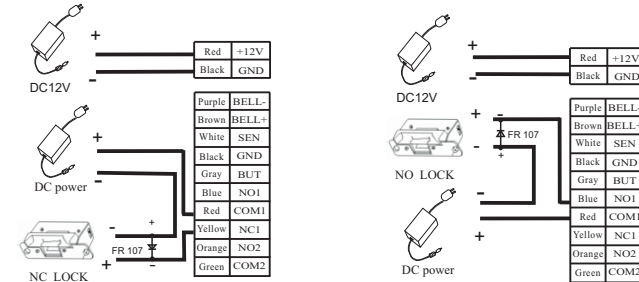
1) Share power with the lock:



Device share power with the lock:

ULOCK=12V, I-LOCK>1A.....①; And the distance between the lock and the device is ≤10 meters.

2) Does not share power with the lock:



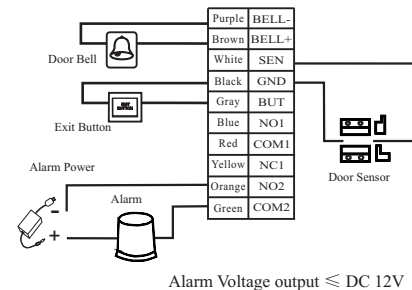
Device does not share power with the lock:

A. ULOCK=12V, I-LOCK≤1A; B. ULOCK≠12V; C. The distance between the lock and the device is >10 meters.

D. We suggest user does not share power with the lock.

①: 'I': device output current, 'ULOCK': lock voltage, 'ILOCK': lock current.

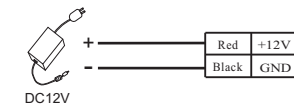
4. Other Connections



Alarm Voltage output ≤ DC 12V

5. Power Connection

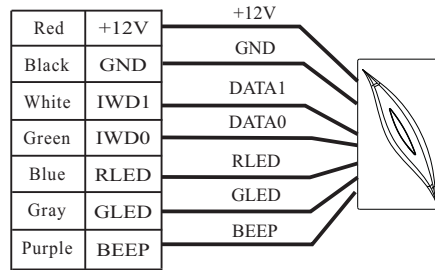
The device working voltage DC12V, electric current 500mA (50mA standby). Positive is connected with '+12V', negative is connected with 'GND' (do not reverse the polarities).



WARNING: Do Not operate with Power connected.

6. Wiegand Input

The device has a Wiegand input port, which enables the connection to a slave card reader. Devices are control devices on both sides of the door to control the access and electric lock.



Access Control Device

Reader

7. Other Functions

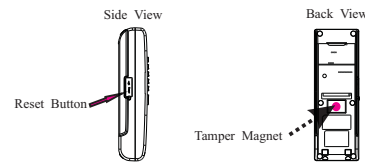
(1) Manual Reset:

If the device does not work properly because of misoperation or other abnormality, you can use 'Reset' function to restart it.

Operation: Remove the black rubber cap, then stick the Reset button hole with a sharp tool (the tip diameter less than 2mm).

(2) Tamper Function:

In device installation, user need to put the magnet between the device and the back plate. If the device being illegally moved, and the magnet being away from the device, it will trigger the alarm.



8. Communication

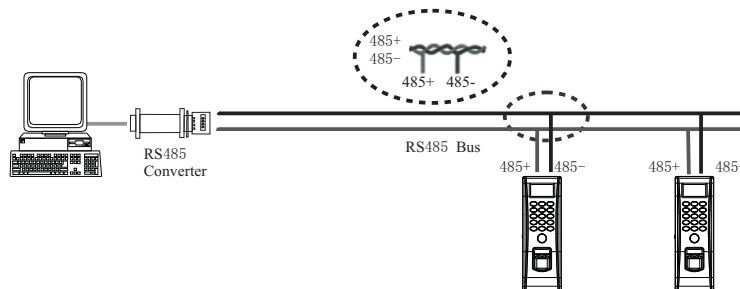
There are two modes that the PC software communicate and exchange information with the device: RS485 and TCP/IP, and supports remote control.

(1) RS485 Mode:

Please use specified RS485 wire, RS485 active converter and bus-type wiring.

Terminals definition please refers to the right table.

Terminals	PC Serial Ports
485+	RS485+
485-	RS485-

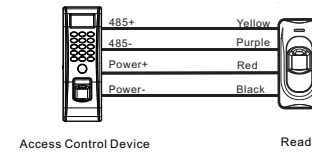


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RS485 Reader Function:

Equipment supports 485reader function, can be through the 485communication connected to FR1200 reader. FR1200 reader for slaver, achieve 485 Anti-passback functions. If select "485reader function", so device can not connect with PC through 485 communications.

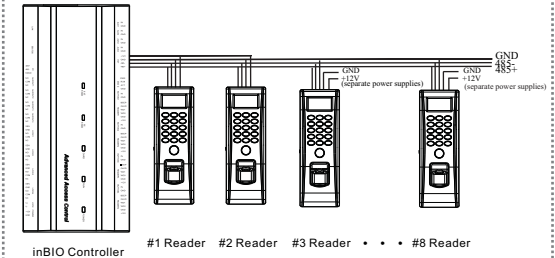
Diagram of the device connect to reader as below (The device act master):



Access Control Device

Reader

Diagram of the device connect to controller as below (The device act slaver):



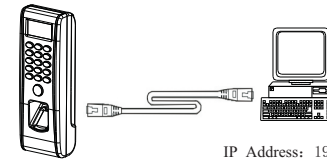
inBio Controller #1 Reader #2 Reader #3 Reader ... #8 Reader

Set the 485 address (device number) by Access3.5 software.

(2) TCP/IP Mode:

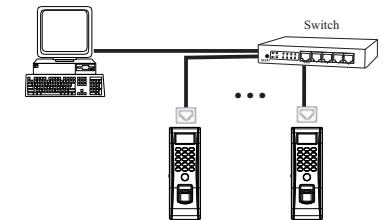
Two ways for TCP/IP connection.

(A) Crossover cable: The device and PC connected directly.



IP Address: 192.168.1.201
Subnet Mask: 255.255.255.0

(B) Straight cable: The device and PC connected to LAN/WAN through switch/Lanswitch.



9. Caution:

- (1) **Power cable is connected after all the other wiring.** If the device is working abnormally, please shut down the power first, then make the necessary check. Kindly reminds you that any hot-plugging may damage the device, and it is not included in the warranty.
- (2) We recommend the DC12V/3A power supply. Please contact our technical staff for details.
- (3) **Please read carefully the terminal description and wiring by rule strictly.** Any damage caused by improper operations will be out of the range of our guarantee.
- (4) **Keep the exposed part of wire less than 5mm,** to avoid unexpected connection.
- (5) Please connect the 'GND' before all the other wiring especially under the environment with much electrostatic.
- (6) Do not change the cable type because of long distance between the power and the device.
- (7) Please use specified RS485 wire, RS485 active converter, and adopt bus-type wiring. If the communication wire is longer than 100 meters, it is needed to parallel a terminal resistance on the last device of RS485 bus, and the value is about 120 ohm.
- (8) Please keep the distance between the device and Access Control or Card Reader less than 90 meters (Please use Wiegand signal extender in long distance or interference environment).
- (9) To keep the stability of Wiegand signal, connect the device and the access control or card reader in same 'GND' in any case.

WARNING: Do Not operate with Power connected.