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BioLite NET

Innovative Fingerprint Terminal

User guide(ver 1.0)

Product Contents

Basic Contents

Main Body

Default

Sub bracket (optional)

Wall-mounting metal bracket

Wall mounting screws – 2 ea

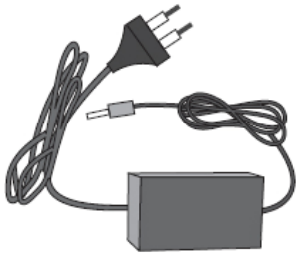
Star-shaped screws

Star-shaped small wrench

E-ring

Software CD

Shrinking Tube



12V power adaptor (optional)

- **Recommended power supply**

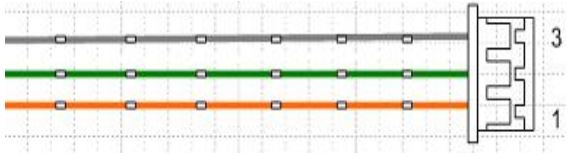
12V ±10%, at least 2500mA for BioLite-NET alone installation.
Comply with standard IEC/EN 60950-1 (CE Certification).
To share the power with other devices, use a power supply with higher current ratings.

Cable spec.

Power & 485

PIN	POWER + 485	WIRE
1	POWER + (12Vdc)	RED
2	POWER GND	BLACK
3	485 GND	WHITE(Black String)
4	485 +	BLUE(Black String)
5	485 -	YELLOW(Black String)

Relay



PIN	RELAY	WIRE
1	NORMAL CLOSE	ORANGE(White String)
2	COMMON	GREEN(White String)
3	NORMAL OPEN	GRAY(White String)

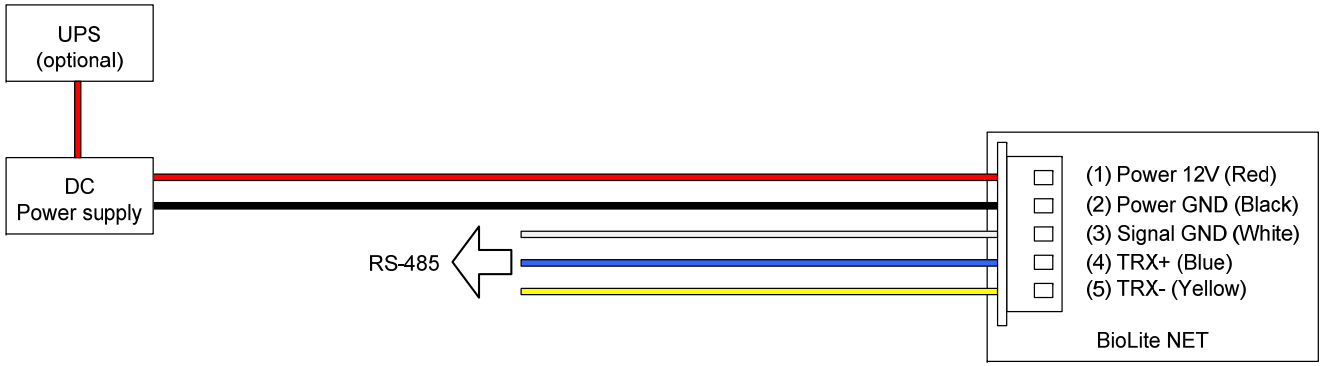
Ethernet

PIN	SWITCH	WIRE
1	ERX -	YELLOW
2	ERX +	BLUE
3	ETX -	ORANGE
4	ETX +	PINK

Switch & Wiegand

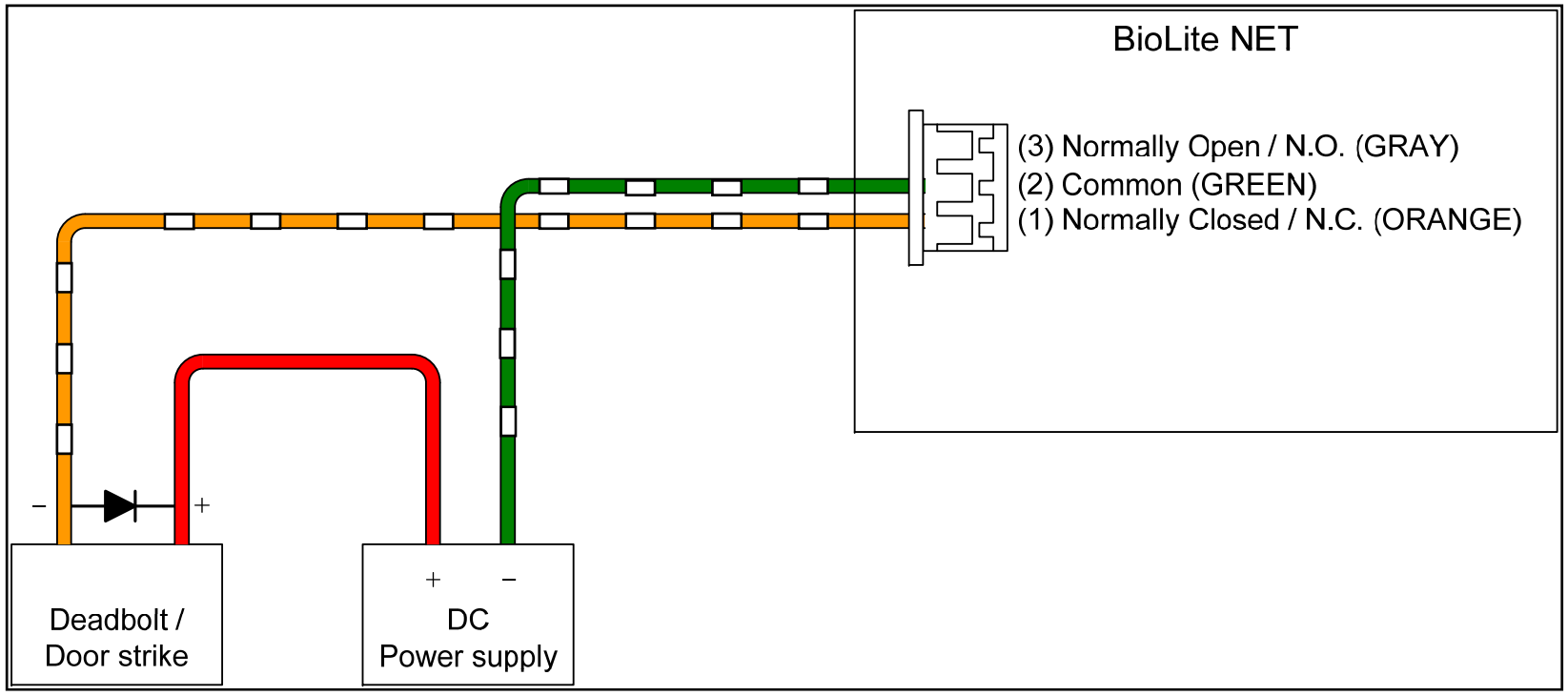
PIN	SWITCH&WIEGAND	WIRE
1	WGND	BLACK
2	WDATA 1	WHITE
3	WDATA 0	GREEN
4	GND	GRAY
5	SWIN 1	BROWN
6	GND	GRAY
7	SWIN 0	PURPLE

Power Connection

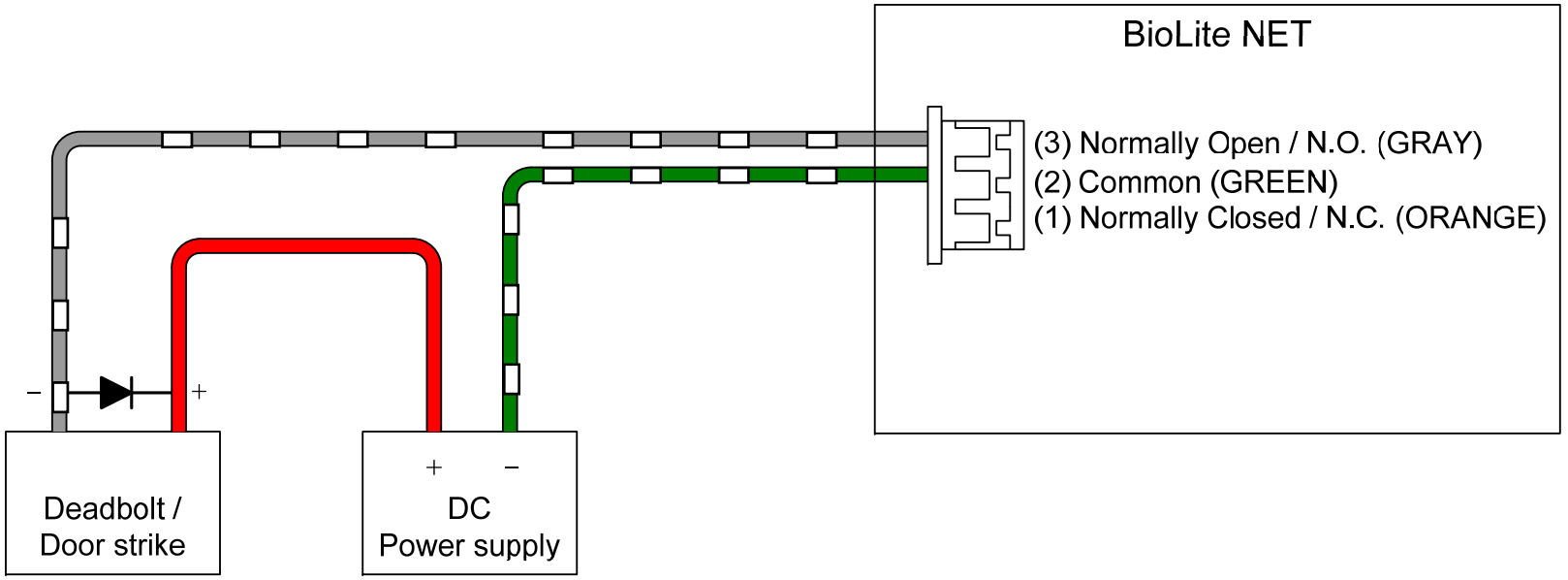


- **Recommended power supply**
  - **12V ± 10%, at least 1000mA.**
  - **To share the power with other devices, use a power supply with higher current ratings.**

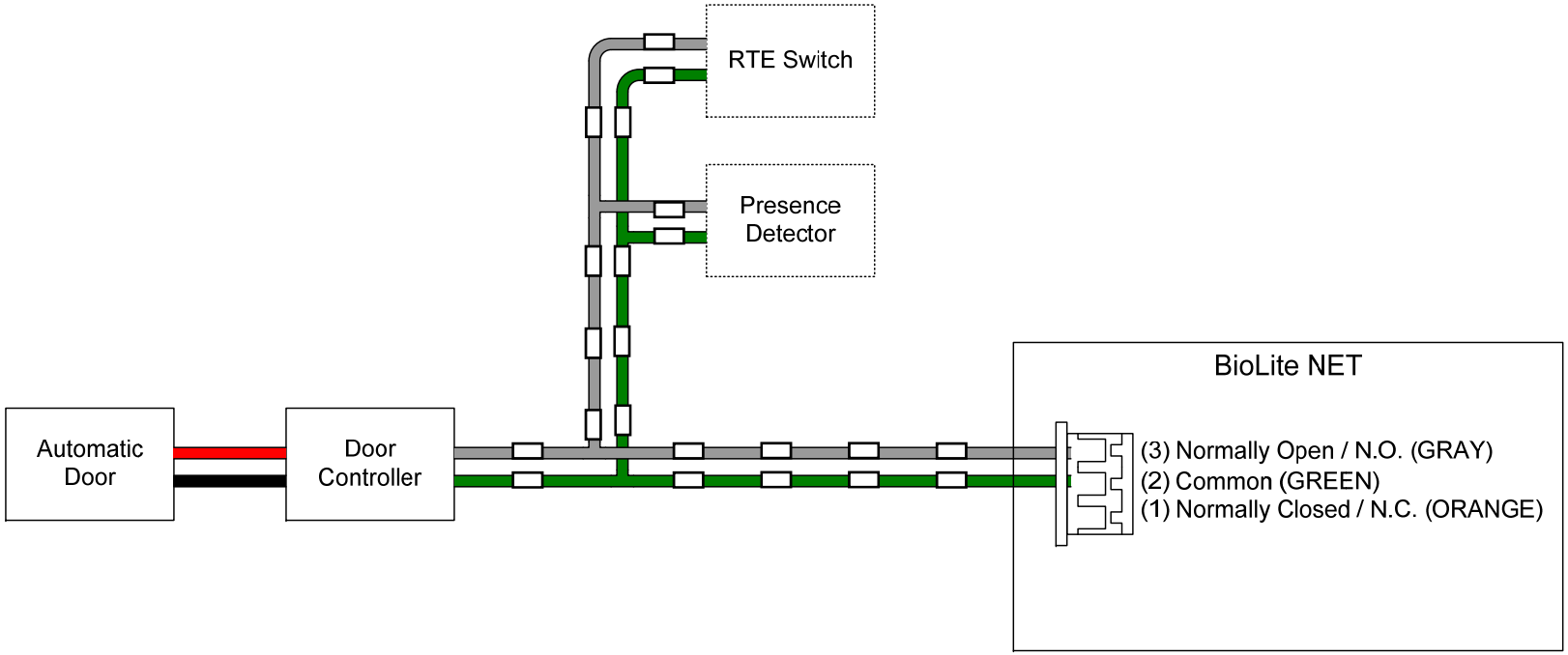
Relay Connection – Fail safe lock



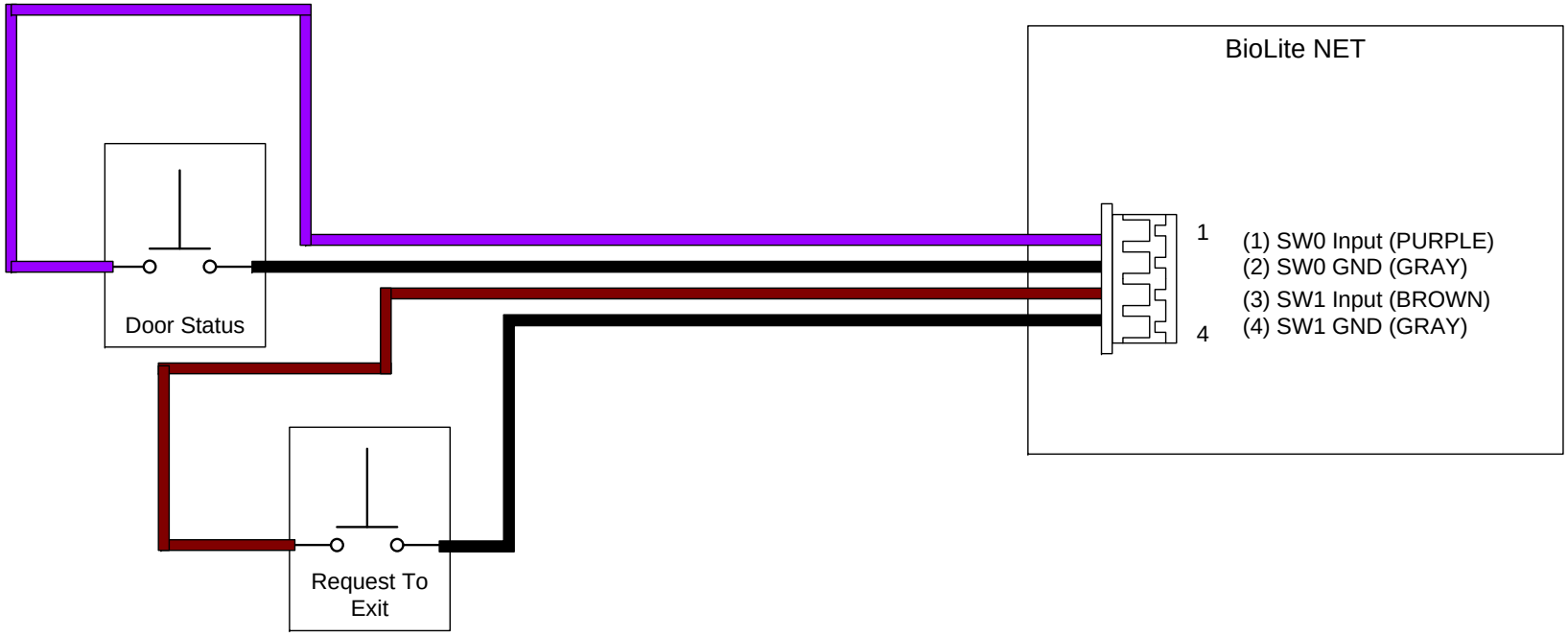
Relay Connection – Fail secure lock



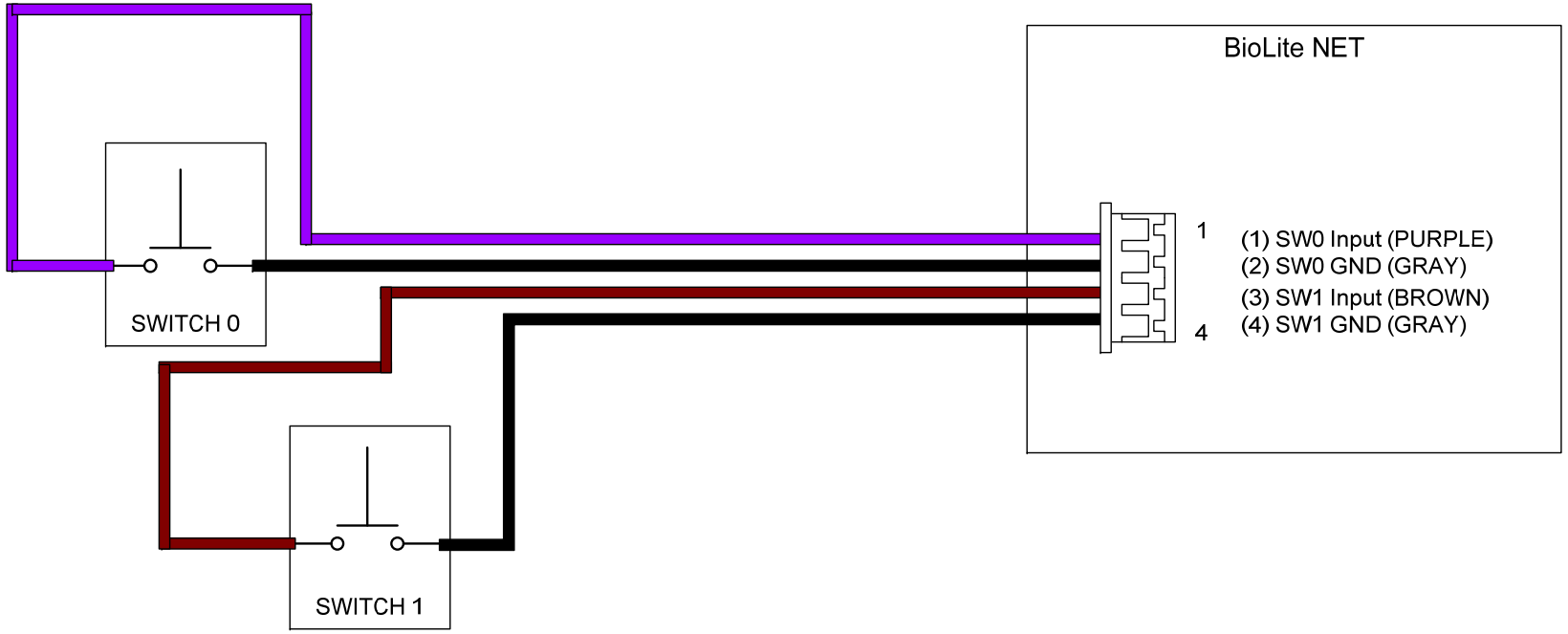
Relay Connection - Automatic door



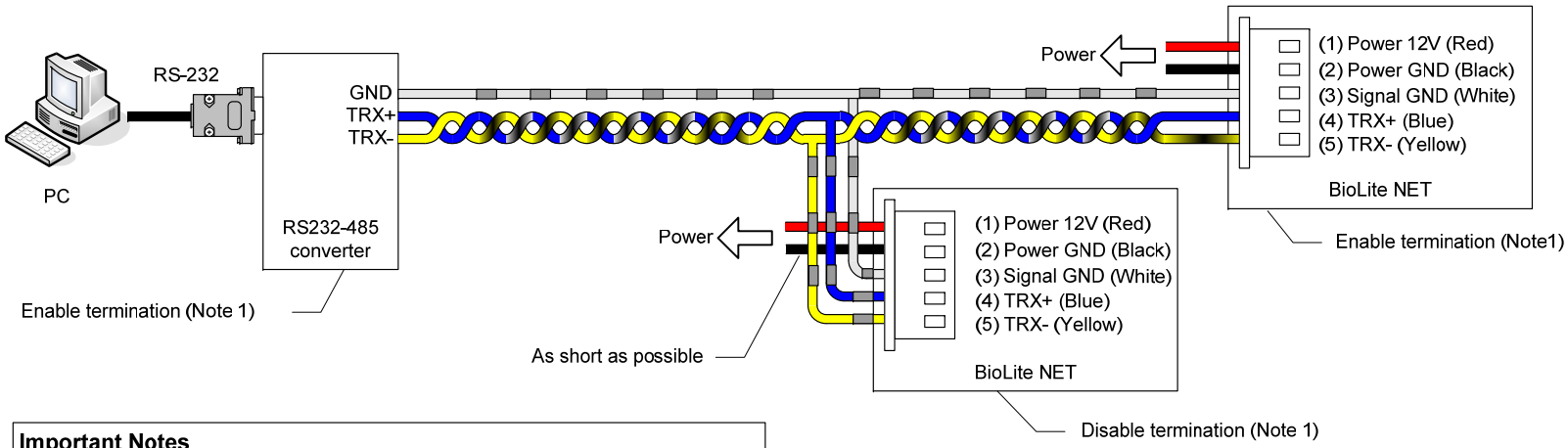
Door switch connection



Switch connection (Alarm, Emergency switches)



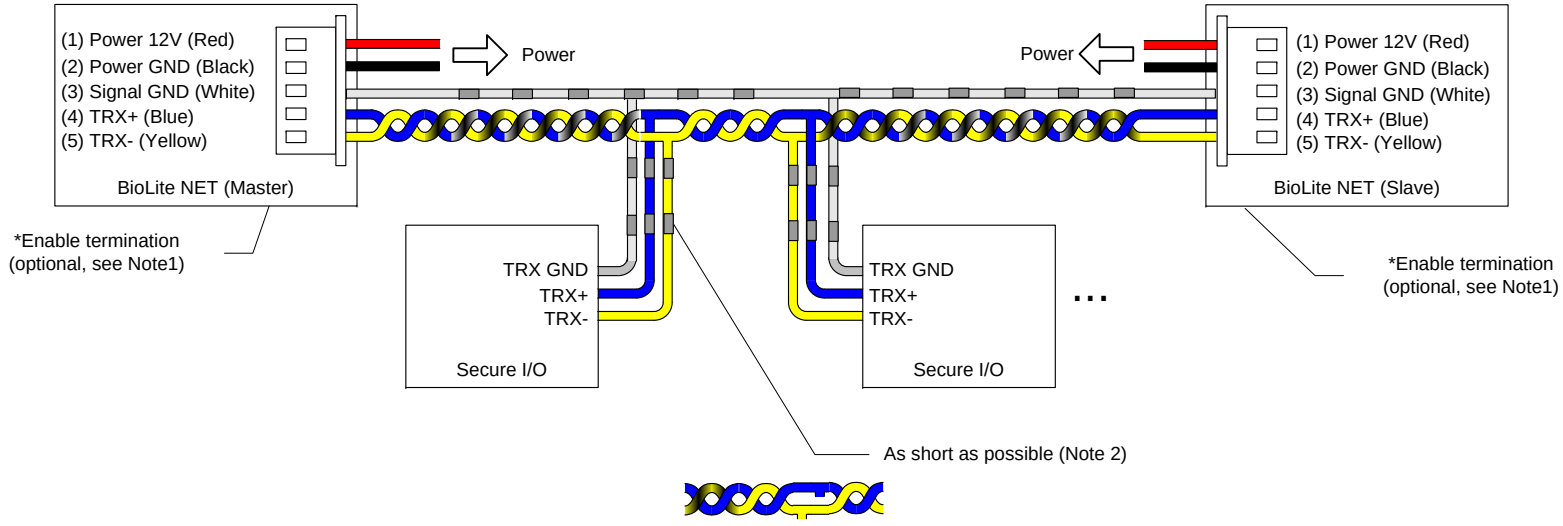
RS485 connection for host communication



Important Notes

1. Only the devices at the both ends of the bus should be terminated. To enable termination on the RS232-485 converter, refer to the converter's manual.
2. Adjust the communication speed as needed. The signal quality vary depending on wiring conditions, and it may be necessary to lower the baudrates.
3. The GND signal may be omitted ***if and only if*** the GND potential difference is less than ±5V.

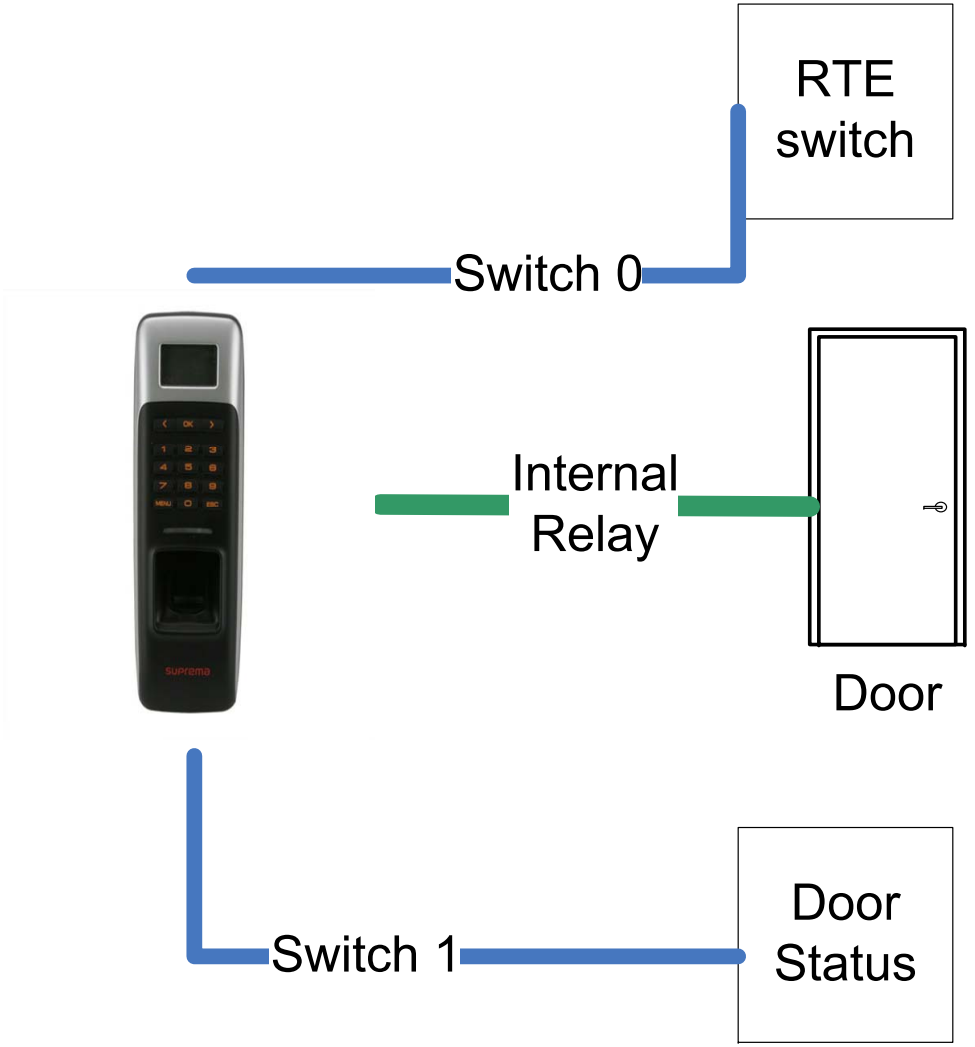
RS485 connection for Secure I/O



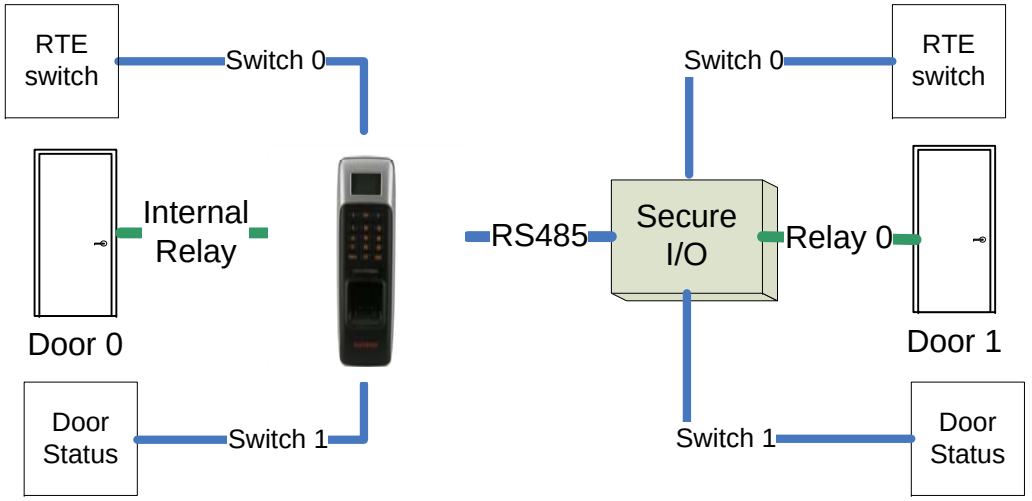
Important Notes

1. For bus termination, only the devices at both ends of the bus should be terminated. To enable termination on the RS232-485 converter, refer to the converter's manual.
2. The stubs should be as short as practical

Installation Reference - Stand alone

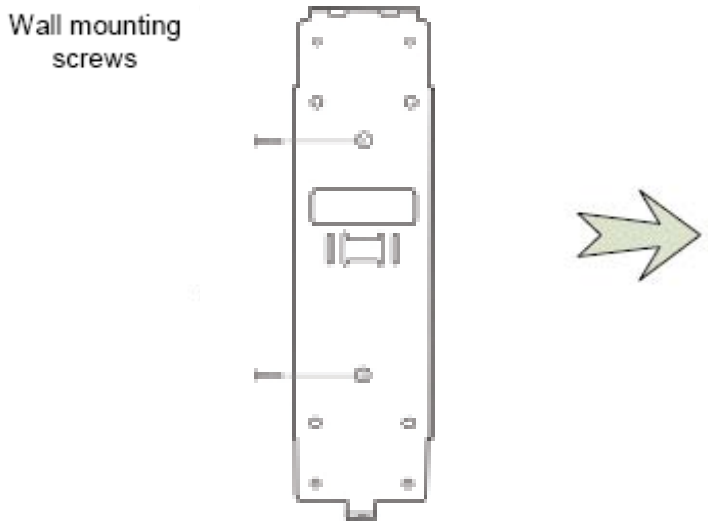


Installation Reference – Using Secure I/O, 2 door

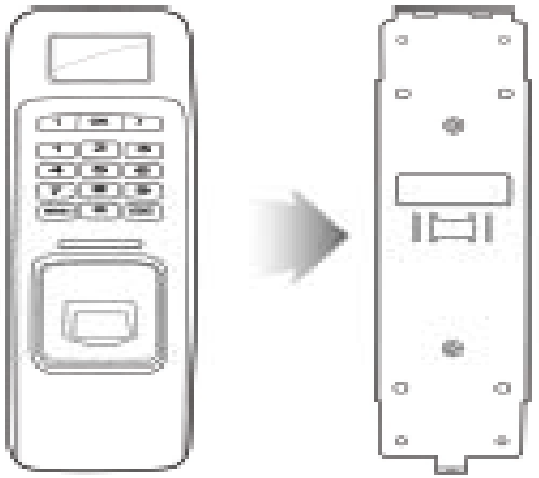


Installation of Wall-mount Bracket

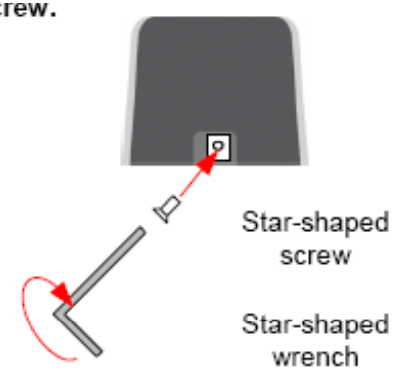
- **Fix wall mount bracket on a wall using wall mounting screws**



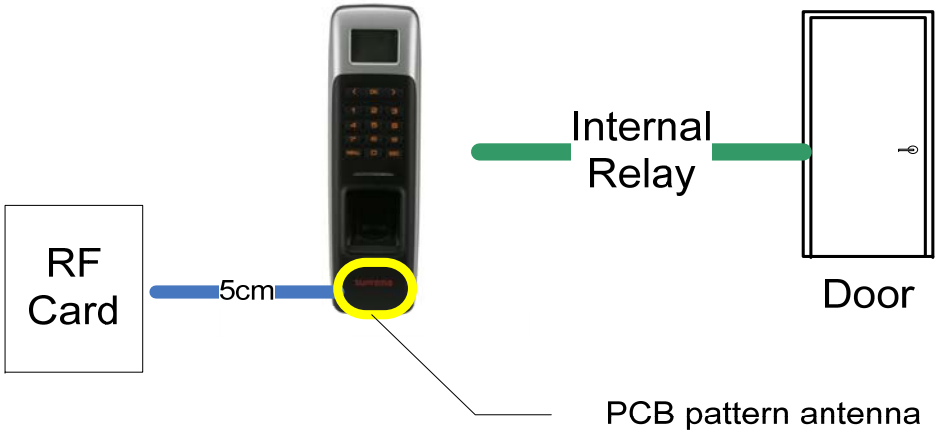
- **Hook BioLite NET on the wall mount bracket**



- **Fix BioLite NET wall mounting bracket using a star shape screw.**



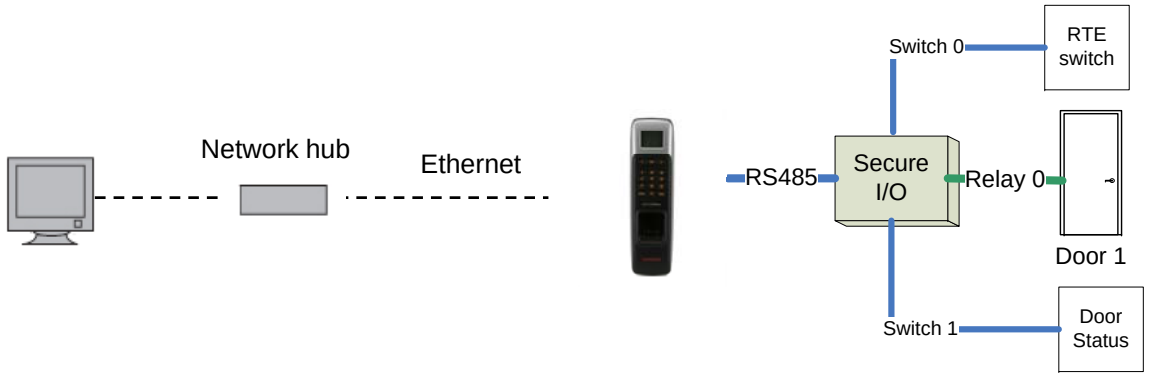
Installation Reference – Using RFID card



item	content
Model	BioLite-NET(BLN-OC)
Transmit	13.56MHz
Receive	13.56MHz
Modulation	ASK
Communication	Single propagation
Channel	Single channel
Mode	1:1

- **Using RFID card (13.56MHz = Mifare model only)**
  - **In case 1:1 mode is set as RF Card**
  - **If the 1:1 mode is set as Card Only, user can access just by placing the card to BioLite-NET without any additional procedure.**

Installation Reference – LAN



- **If you select Network on initial UI menu, Network Setup menus appear on the display.**
- **If you select TCP/IP on network menu, following menus appear on the display.**

LAN TYPE	• Setting : Disable/Ethernet • Used when connected to PC via Ethernet using RJ45 connector on the rear of the device.
Max conn	• Setting : 1/4/8/16 • Max number of clients that can access the device at the same time.
SSL	• Setting : Use/not use. • It sets Use or Not Use of SSL between the TEST_UI and BioLite-NET.
DHCP	• Setting : Use/not use • Using DHCP, you can receive IP address and other necessary setting from server automatically. • Check whether an appropriate DHCP server is available in your network environment before use.
IP Address, gateway, subnet	• Without using DHCP, IP address, gateway, and subnet need to be entered manually. Inquire necessary settings to network administrator.

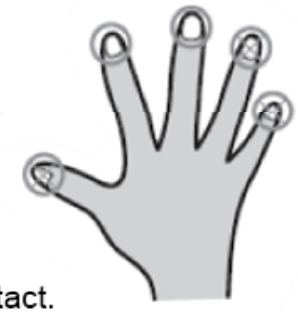
Electrical Specification

	Min.	Typ.	Max.	Notes
Power				
Voltage (V)	10.8	12	13.2	Use regulated DC power adaptor only
Current (mA)	-		250	
RTC Battery				
Voltage (V)	2.7	3	3.3	Lithium-ion rechargeable battery
Current (mAH)	-		11	
Switch Input				
V_{IH} (V)	-	TBD	-	
V_{IL} (V)	-	TBD		
Pull-up resistance (Ω)	-	4.7k	-	The input ports are pulled up with 4.7k resistors
TTL/Wiegand Output				
V_{OH} (V)	-	5	-	
V_{OL} (V)	-	0.8	-	
Pull-up resistance (Ω)	-	4.7k	-	The outputs ports are open drain type, pulled up with 4.7k resistors internally
Relay				
Switching capacity (A)	-	-	1 0.3	30V DC 125V AC
Switching power (resistive)	-	-	30W 37.5VA	DC AC
Switching voltage (V)	-	-	110 125	DC AC

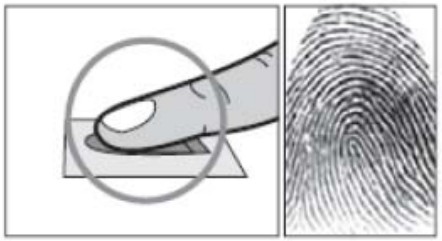
How to place a finger

Suprema's fingerprint products show an outstanding recognition performance regardless of the user's fingerprint skin condition or the way of fingerprint positioning. However, following tips are recommended to get more optimal fingerprint recognition performance.

- **Select a finger to enroll**
  - It is recommended to use an index finger or a middle finger.
  - Thumb, ring or little finger is relatively more difficult to place in a correct position.



- **How to place a finger on a sensor**
  - Place a finger such that it completely covers the sensor area with maximum contact.
  - Place core part of a fingerprint to the center of a sensor.
    - People tend to place upper part of a finger.
    - The core of a fingerprint is a center where the spiral of ridges is dense.
    - Usually core of fingerprint is the opposite side of the lower part of a nail.
    - Place a finger such that the bottom end of a nail is located at the center of a sensor.
  - If a finger is placed as in the right picture, only a small area of a finger is captured. So it is recommended to place a finger as shown in the left picture.



Troubleshooting

- Fingerprint can not be read well or it takes too long.
  - Check whether a finger or fingerprint sensor is stained with sweet, water or dust
  - Retry after wiping off finger and fingerprint sensor with dry towel.
  - If a fingerprint is way too dry, blow on the finger and retry.
- Fingerprint is entered but authorization keeps failing.
  - Check whether the user is restricted by door zone or time zone
  - Inquire of administrator whether the enrolled fingerprint has been deleted from the device for some reason
- Authorized but door is not opened.
  - Check whether the time is set as lock time.
  - Check whether an antipass back mode is in use. In antipass back mode, only who entered can exit.
- Device doesn't operate though power is connected.
  - Check whether a device and a bracket is well connected to each other. If not, a tamper switch is activated and the device doesn't work.
- RTC Battery caution.
  - Risk of explosion if battery is replaced by an incorrect type.
  - Dispose of used batteries according to the instructions.

FCC Rules

Caution

- Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

Warning

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Information to User

- This equipment has been tested and found to comply with the limit of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, user and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guaranteee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

  1. Reorient / Relocate the receiving antenna.
  2. Increase the separation between the equipment and receiver.
  3. Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
  4. Consult the dealer or an experienced radio/TV technician for help

Suprema Inc.
16F Parkview Office Tower, Jeongja-dong, Bundang-gu,
Seongnam, Gyeonggi, 463-863 Korea
E-mail : support@supremainc.com
Website : www.supremainc.com
Tel : 82-31-710-2400
Fax : 82-31-783-4506