## suprema BioLite Net

IP based Outdoor Fingerprint Terminal

#### User Guide EN 102.00.BLN V1.22









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## **Safety Instructions**

#### Installation



Use the power adapter provided or one for 12V 0.5A or above. When sharing the power with other devices such as electric door lock, check the power capacity considering power requirements for each device. If appropriate power is not used, it may not operate normally.

#### In Use



## **1. Before Use**

### 1.1 Components



Note

The components shown above may differ depending on the installation environment.

## 1.2 Body



No.	Name	Description
1	LCD Display	The operation status is displayed.
2	Key Pad	0–9 Buttons: Used to enter the ID and password. < > Arrow Buttons: Used to move the selected item. (OK) Button: Used to select the desired function. (MENU) Button: Used to enter or exit the menu. (ESC) Button: Used to exit from the menu or cancel the desired action.
3	LED Lamp	<ul> <li>The operation status is displayed with an alert sound.</li> <li>Green (Sound: beep beep beep beep!): Authorization success</li> <li>Red (Sound: beep beep beep!): Authorization failure</li> <li>Pink (Sound: beep!): Processing</li> <li>Blue and Yellow blink in turn at an interval of 2 seconds (No sound): No IP address is given because DHCP is set in TCP/IP Setup</li> <li>Blue and Sky Blue blink in turn at an interval of 2 seconds (No sound): Normal operation</li> <li>Red and Pink blink in turn at an interval of 2 seconds (No sound): Normal operation</li> <li>Red and Pink blink in turn at an interval of 2 seconds (No sound): Device locked or no administrator</li> <li>Blue and Red blink in turn at an interval of 2 seconds (No sound): The time is reset due to battery discharge.</li> <li>At first use, Red blinks at an interval of 2 seconds (No sound): Initialization error, Consult with the manufacturer.</li> <li>In normal use, Red blinks at an interval of 2 seconds (No sound): On the watch.</li> <li>Yellow blinks shortly (No sound): Entry standby or in communication for getting an IP when DHCP is set in TCP/IP Setup</li> </ul>
4	Fingerprint Touch Area	Used to input a fingerprint for authentication.

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## 1.3 Methods for fingerprint input

BioLite Net can easily recognize fingerprints even though the angle and location of the pattern change. However, it is recommended to properly input fingerprints for more precise recognition.

#### Selecting a finger on fingerprint enrollment Up to two fingerprints can be enrolled for each user in preparation of any abnormal situation like having a wounded finger or carrying an object with a hand. In the case of a low recognition, the user can register the same fingerprint twice to increase the recognition rate. It is recommended to use the index or middle finger. In case of other fingers, the recognition rate decreases because it tends to be more difficult to place the finger in the center of the sensor area.

#### How to proerply place a fingerprint

Place your finger firmly on the sensor area.

Adjust the finger so that its middle position can be located in the center of the sensor.

When the finger is vertically placed or its angle goes astray, the recognition may be a failure.



When enrolling your fingerprint, the first finger input window prompts. Then register the desired finger on the terminal as shown in the figure below.

When the re-entry window appears with a "tick" sound, re-enter the previously enrolled finger. The fingerprint input is made twice. (Gently push your finger on the sensor to have a full fingerprint.)





#### In case fingerprint is not recognized normally

BioLite Net is designed to normally operate regardless of weather change or the angle and location of the fingerprint to place.

However, the recognition rate may vary depending on the external environment or fingerprint condition.

In abnormal cases, follow the directions below:

- 1. Retry after drying the wetness of your finger.
- 2. When your finger is too dry, retry after blowing on your fingertip.
- 3. When you have a cut on your registered finger, register another fingerprint.



#### **Cautions while registering your fingerprint**

The initial fingerprint registration is important.

Because the recognition process compares the scanned fingerprint with the registered one, an abnormally registered fingerprint can cause a failure.

To increase the recognition rate, follow the directions below:

1. Put the center of your fingerprint on the middle of the sensor.

2. If you have a cut in your finger or your fingerprint is not clear enough, retry with another finger.

3. When fingerprint recognition is in progress, do not move your fingerprint .



**Before Use** 

## 1.4 System setup procedure

Step 1	Install the system according to the environment - Grasp the locations for installation site, door open switch, dead bolt, and such Install the system (see 6.4).				
Step 2	<b>Register an initial administrator</b> - Register the initial administrator for setting devices (See 1.4.1).				
Step 3	Configure the system - Network configuration (see 1.4.2) - Stand alone configuration (see 1.4.3.) or Secure I/O configuration (see 1.4.4)				
Step 4	Test for system operation         - Check the door lock/unlock status and switch operation.         - Deliver the setting items to the customer.				
Step 5	Configure the environment - Configure various environments (see 1.4.5).				
Step 6	Register users - Use the system after user registration (see 2.1).				

#### 1.4.1 Registering the initial administrator

There is no administrator set for the product in the initial status. So register an administrator for configuring the environments for relay, door open switch, door open detection sensor, and such.

- When the product is connected, a window appears as shown in the right figure. Enter an ID and press OK.
- When the authorization mode window appears, use ◄/► buttons to move to PIN Only, and press OK.
- When the password entry window appears, enter the desired password and press OK.
- **4.** When the password re-entry window appears, enter the previously input password again and press **OK**.
- 5. The completion message window appears.



**BioLite Net** 

**Before Use** 



PIN Only

Enroll





Completed

No No

This procedure is necessary to temporarily configure the installationrelated settings. Modify the administrator information after the installation is complete.

#### 1.4.2 Network configuration

The network configuration is required to connect the dedicated PC software or other devices via network. Configure the settings according to the communication environment in your place.

#### [In case of configuring the network via Ethernet]

- Connect the terminal to the computer that has the dedicated PC software according to the network environment after seeing "6.4.6 Connecting network."
- **2.** Configure the settings for TCP/IP port and server according to the installation environment.





#### [In case of configuring the network via RS-485]

- Connect the terminal to the computer that has the dedicated PC software or to another device according to the network environment after seeing "6.4.3 Connecting Power & RS-485."
- **2.** Configure the settings for RS-485 according to the installation environment.



#### 1.4.3 Stand-alone configuration

This configuration is required to use the device for stand alone purpose, which requires no communication with PC or other devices.

1. As shown in the figure, connect BioLite Net to respective switches.



**2.** Configure the internal relay settings as shown below. (It is explained based on the figure above.)





**BioLite Net** 

**Before Use** 





#### 1.4.4 Configuring Secure I/O

This connects BioLite Net to Secure I/O.

 Connect wires between BioLite Net, Secure I/O, and respective switches as shown below. BioLite Net

**Before Use** 



**2.** Configure the relay settings as shown below. (Based on the figure above)

Follow the instructions below only when the dedicated PC software is not used. When using the software, refer to the software manual.





Note

When you exit from the menu before completing the relay setup, the configuration is not stored so please finish configuration until the message "Complete" appears.

#### 1.4.5 Configuring environment settings

- Settings for date and time: Set the values as "3.1 Date, Time."
- Fingerprint authorization related settings: Set the values after reading the case of fingerprint selection in "4.1 Authorization."
- Operation mode setting: Finish the setting after seeing the operation mode selection case in "4.1 Authorization."

## 1.5 Authorization methods

For changing the terminal authorization method, see the operation mode selection case in "4.1 Authorization."

To separately set the authorization method for each user, see "2.2 Editing a user data."

#### 1.5.1 Finger Only

When the user authorization method is set to "Finger Only," you can open the door by using the three different methods:

- 1. Fingerprint recognition
- 2. Fingerprint recognition after entering ID
- 3. Fingerprint recognition after identifying user card









#### 1.5.2 Finger or PIN

When the user authorization method is set to "Finger or PIN," you can open the door by using the five different methods:

- 1. Fingerprint recognition
- 2. Fingerprint recognition after entering ID
- 3. Password entry after entering ID
- 4. Fingerprint recognition after identifying the user card
- 5. PIN entry after identifying the user card







#### 1.5.3 Finger and PIN

When the user authorization method is set to "Finger and PIN," you can open the door by using the three different methods:

- 1. PIN entry after identifying fingerprint
- 2. PIN entry after entering ID and fingerprint
- 3. PIN entry after entering user card and fingerprint









#### 1.5.4 PIN Only

When the user authorization method is set to "PIN Only," you can open the door by using the two different methods:

- 1. PIN entry after entering ID
- 2. PIN entry after identifying user card





#### 1.5.5 Card Only

When the user authorization method is set to "Card Only," you can open the door by following the instructions below:



## 2. User Management

The user management and other environment settings can be updated after authorizing the registered administrator (see 1.4.1 "Registering the initial administrator").

## 2.1 Enrolling a user

#### 2.1.1 Registration on the terminal

The information of a new user can be saved on the terminal.

1. Use ◀/► buttons to select the User (Â) icon and press OK.

2. Use </ > buttons to select Enroll (∑) icon and





Enter ID

3

Enroll



(1-8 digit number)

press OK.



- 4. Use 
   A buttons to select Device on the Enroll To and press OK.
  - You can save the user information (including finger print) on your terminal or card.



5. Use </ >
 → buttons to select a card ID entry type and press OK.

\*Not Use/Read Card/Manual Input/User ID







6. Use 
 (Level: General /Administrator)

 ★ The user enrollment and environment configuration are enabled only in Administrator level.



**7.** Enter the finger or PIN depending on the **operation mode**. (Password: 4–8 digit number, Fingerprint:  $1^{st}$  finger or  $1^{st} + 2^{nd}$  fingers)

Enter the required information after selecting **Device > Authorization > Operation Mode > Auth Mode**.





 8. When the user enrollment is successfully done, the completion message window appears.
 XUser can be enrolled up to maximum 5000.

Completed

#### 2.1.2 Registration on the card

The information of a new user can be saved on a card.

- **1.** Use  $\triangleleft$  buttons to select the User ( $\Re$ ) icon R Œ and press OK. EA User **BioLite Net** 2. Use ◄/► buttons to select Enroll (分) icon and press OK. **User Mgmt** Enroll 3. The ID that can be used appears. Use it or enter Enter ID another ID and press OK. 3 (1-8 digit number) Enroll Note ID is used to edit or delete the user data so please keep it carefully. **4.** Use **◄/**► buttons to select **Card** on the **Enroll** Enroll To To and press OK. Card \* You can save the user information (including finger print) on your terminal or Enroll card. Only a rewritable card such as Mifare card can save the user information. **5.** Use **◄**/**▶** buttons to select Level and press **OK**. Level (Level: General /Administrator)
  - \*The user enrollment and environment configuration are enabled only in Administrator level.





## 2.2 Editing a user data

You can modify the data of the previously enrolled user.

- Use ◄/► buttons to select the User (Â) icon and press OK.
- 2. Use ◄/► buttons to select the Edit ( ) icon and press OK.
- Enter the ID or fingerprint of the desired user and press OK.



€

User

E A

 $\mathcal{Q}$ 





Use 
 ↓ buttons to select the desired item and press OK.
 ※select any of Level/Operation Mode/Security Level/Finger/PIN/Access Group(1~4)





Use **◄/**► buttons to select **Security Level** and press **OK**.

Use **◄**/**▶** buttons to select a security level.

Press OK.

- \*Security Level: \*Per Device/Lower/Low/Normal/High/Higher
- Per Device: The security level in "Device>Authorization>Fingerprint>" on page 39 is applied.
- The higher the security level, the more sensitive the fingerprint recognition. But the authorization failure rate can increase.









## 2.3 Deleting a user data

You can delete unnecessary user data.

- 1. Use ◀/► buttons to select the User ( A) icon and press OK.
- 2. Use ◄/► buttons to select the Delete (∑) icon and press OK.
- After entering the ID or finger to delete and press OK.



**BioLite Net** 

**User Mgmt** 



4. When the action is successfully made, the message Deletion appears.
The deleted user cannot be recovered.
If necessary, enroll it again.



- If all the users including the administrator are deleted, you must register the initial administrator again (see 1.4.1).
- When an administrator is deleted by mistake except normal users, the initial administrator registration step does not require registering normal users.

# **3. Configuration for Screen and Sound**

## 3.1 Date, Time

You need to set the current system date and time. After setting the date and time, the log data can store correct information.

- Use 
   buttons to select the Screen, Sound
   icon and press OK.
- 2. Use **◄**/**▶** buttons to select the **Date**, **Time** () icon and press **OK**.





- Enter the current date by following the suggested format and press OK.
   For example, in case of November 15 in 2008, enter "20081115" and press OK.
- 4. Enter the current time by following the suggested format and press OK.
  For example, in case of 10:20 55 AM, enter "102055" and press OK.



Time(hhmmss) 102055 Date, Time
## 3.2 Backlight

- Use 
   buttons to select the Screen, Sound
   () icon and press OK.
- Use ◄/► buttons to select Backlight (<sup>b</sup>) icon and press OK.
- **3.** Use **◄**/**▶** buttons to select a backlight operation status and press **OK**.







BioLite Net

Screen & Sound







## 3.3 Sound

- Use 
   buttons to select the Screen, Sound ((
   ) icon and press OK.
- 2. Use </ > buttons to select Sound ( ( )) icon and press OK.



3. Use  $\triangleleft$  buttons to select the sound operation status and press OK.





# 4. Device Configuration

### 4.1 Authorization

- Use ◄/► buttons to select the Device (() icon and press OK.
- 2. Use </ > buttons to select the Authorization () icon and press OK.
- **3.** Use **◄**/**▶** buttons to select any of Fingerprint, and Operation Mode and press **OK**.













## 4.2 In/Out

- 1. Use </ > buttons to select the **Device** ( ) icon and press **OK**.
- Use ◄/► buttons to select In/Out (10) icon and press OK.
- Use ◄/► buttons to select any of Serial Conn., Tamper On, Door Wiegand, and TCP/IP and press OK.



**€**€

Device

I/O

In/Out

Item

Serial Conn.

R

F

E A

LT















PC software. It is recommended to set the TCP/IP port to "1471" and Server to "1480." (When the port number is modified as you want, TCP/IP communication may not be active.) BioLite Net

## 4.3 System

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 Use 
 buttons to select the Device (() icon and press OK.

R

A

Device

1/0

System

Item

Information

E

- 2. Use **◄**/**▶** buttons to select the **System** ( ) icon and press **OK**.
- Use 
   buttons to select any of Information, Factory Default, Delete All Log, Delete User DB, and Language and press OK.













# **5. Attendance Management**

## 5.1 Operating environment

When an event (attendance, leaving, return, and outside duty) is received from the terminal, it is reported to the server of the dedicated PC software. You can create a report from the events stored in the server.

With the dedicated PC software, you can also define new event other than the abovementioned basic events and apply it to the report.

In case of basic events provided, each event causes the door to open. You can configure the settings according to the environment through the dedicated PC software.



### 5.2 Setup for attendance management

- Use 
   buttons to select the Device (
   icon and press OK.
- 2. Use </ > buttons to select the Authorization (()) icon and press OK.
- Use 
   buttons to select the Operation Mode and press OK.
- **4.** Use **◄**/**▶** buttons to select the **Time Attendance** and press **OK**.
- **5.** Use **∢**/**▶** buttons to select the Operation Mode of Time Attendance and press **OK**.



Device Device

\*Operation modes: \*Key Input/Fixed/Manual/Auto/Not Use

- Key Input: In usual time, the function is inactive. When </>
   → buttons are pressed, you can select the attendance status. When a user authorization is successful, the selected attendance log is recorded.
- **Fixed**: A specific attendance status continues. When a user authorization is successful, the corresponding log is recorded.
- Manual: The active attendance status appears on the screen and it can be changed using 
   buttons. Once it is changed, the status continues until another selection is made. Every authorization success makes the log recorded.
- **Auto**: The active attendance status appears on the screen. Fore each time zone, the active attendance statuses are fixed.
- Not Use: The function is not available.

## 5.3 Operation modes

#### 5.3.1 Key Input

When the operation mode is set to "Key Input," this mode is used.



#### 5.3.2 Manual

When the operation mode is set to "Manual", this mode is used.





#### 5.3.2 Auto

When the operation mode is set to "Auto," this mode is used.

This mode can set the corresponding time zone for each attendance event through the dedicated PC software. Then the fixed event is set for the corresponding time zone.



**BioLite Net** 

Device

### 5.3.3 Fixed

When the operation mode is set to "Fixed," this mode is used.

This mode is used after fixing the event through the dedicated PC software if required. In this case, the setting can be changed only through the dedicated PC software and you cannot change the attendance event through the terminal.



# 6. FAQ

# 6.1 Error messages

Error Message	Description		
Access Restricted	The authentication trial happens except for the allowed time zone.		
!Cannot Change	A template already exists when you want to change the template format.		
Cannot Format	The card is not formatted due to improper card touch.		
Cannot Write	The user information is not saved due to improper card touch.		
Device Locked	The device is locked because the case has been open.		
Duplicate Card	The card has been already registered.		
Duplicate Finger	When enrolling a user fingerprint, the fingerprint that has been input already exists in the device (when checking the duplicated case).		
Duplicated Time	The time zone is duplicated.		
!Failed	The number of users exceeds 5000, so you cannot enroll more users.		
!Failed	The user ID to delete does not exist.		
!ID In Use	The user ID to enroll already exists.		
Invalid Value	An invalid value is entered.		
Mode Error	The authorization mode is different from the setting.		
!No Card	You tried authorization with a unregistered card.		
!No Log	There is no log data.		
Not Administrator	A normal user tries to enter the menu.		
Not Authorized	The fingerprint authentication for the administrator fails when entering the menu.		
!Not Matched	The entered fingerprint or password is not matched to the enrolled one. - In case of fingerprint entry, the entered two fingerprints of the same finger are different.		
Not Recognizable	The fingerprint data cannot be extracted due to wrong finger input.		
!Time Out	The fingerprint data is not entered while the sensor is active.		
!Unknown Finger	The entered fingerprint for entering the menu or editing/deleting a user data does not exist.		
!Unknown ID	The user ID that does not exist in the device is entered.		
Wrong PIN	The entered password for authentication is not matched the enrolled one.		

BioLite Net



F A Q

# 6.2 Troubleshooting

Category	Trouble	Solution		
Power	The power is supplied but the device does not operate.	<ul> <li>When the device is disconnected from the bracket, it may not work when using the tamper switch.</li> <li>Check the adapter or power cable.</li> </ul>		
Password	The password is lost.	<ul> <li>Enter the queried password after contacting the administrator in case of a normal user.</li> <li>When the administrator password is lost, contact with the installation agency.</li> </ul>		
	The locked door is not open after entering the password and pressing <b>OK</b> .	<ul> <li>Check whether the correct password is input.</li> <li>Check whether you have changed the password recently.</li> <li>If you cannot find the password, contact the administrator.</li> </ul>		
Fingerprint	The fingerprint has been enrolled but its recognition encounters an error.	<ul> <li>BioLite Net has the technology of Suprema that won the first award in FVC2004 and FVC2006 because it has world number one quality in recognition.</li> <li>For better performance in fingerprint recognition, correct registration is a must.</li> <li>Enroll the fingerprint again after seeing "1.4 Methods for fingerprint input"</li> <li>The recognition rate may vary due to the characteristic of each finger so enroll the fingerprint of another finger.</li> </ul>		
	It was good at recognizing fingerprints but suddenly it fails in recognition.	<ul> <li>Check whether the finger or the sensor is covered with sweat, moisture, or dust.</li> <li>In case the fingerprint has any damage, the device may consider it as the one of wrong person.</li> <li>Wipe the finger or sensor with a dry cloth and retry.</li> <li>When the fingerprint is so dry, blow your steam of breath into it and retry.</li> </ul>		
Door lock	Even if you close the door, the door is not locked The electric lock failure is most likely to happen. Cl after contacting the installation agency.			
Time	The time is not correct.	not - BioLite Net has an embedded battery but it can be discharged by a long time use. Accordingly the time ma not be correct. Correct the time after seeing "3.1 Date, Time."		
ТСР/ІР	The terminal data is not found by the dedicated PC software.	<ul> <li>Check the connection status after setting on the terminal like Terminal &gt; System &gt; Wallpaper &gt; Type2.</li> <li>When U is displayed: Check the LAN connection status.</li> <li>When D is displayed: Check the IP address. If you set like Terminal &gt; In/Out -&gt; TCP/IP -&gt; DHCP Not Use, the current IP address appears. If you use DHCP, the actual address received from the DHCP server appears. If the IP address is set correctly, check the port number.</li> </ul>		
Administrator connection	The administrator mode cannot be entered because of losing the administrator password or resignation.	<ul> <li>BioLite Net allows the administrator to give access right so only the administrator can enter the menu.</li> <li>When you have no choice but to enter the administrator menu, you can be granted an administrator password after following the predefined procedure. (Contact with the installation agency.)</li> </ul>		

# 6.3 Usage summary

\* It provides the mainly used functions.

 $\ast$  ( $\fbox$  button: Used to select the desired function.

Function	Method for setting (Sequentially perform the following items.)
Initial administrator registration	Enter ID - Enter password - Enter password again
Date & time setting	Select Screen, Sound () icon → Select Date, Time () icon → Enter date → Enter time
User registration	Select User ( ) icon - Select Enroll ( ) icon - Enter ID - Select General or Administrator in Level - Enter fingerprint or PIN
User password modification	Select User (A) icon → Select Edit (A) icon → Enter ID or fingerprint → Select PIN → Enter the desired password → Enter it again
User fingerprint modification	Select User (A) icon Select Edit (A) icon Enter ID or fingerprint Select Fingerprint Enter the fingerprint of the user Enter it again
User authorization method modification	Select User (A) icon Select Enroll (A) icon Enter ID or fingerprint Select Operation Mode Select an authorization method
User deletion	Select <b>User</b> (ᢙ) icon → Select <b>Delete</b> (ゐ) icon → Enter ID or fingerprint to delete
All user deletion	Select Device ((a)) icon - Select System (a)) icon - Select Delete User DB - Select Delete
Initialization (Environment settings deletion)	Select Device (()) icon → Select System ()) icon → Select Factory Default → Select Initialize

Net

# 6.4 System Installation

### 6.4.1 Cable specifications



Туре	No.	Name	Color		
	1	SWIN0	Purple		
	2	GND	Gray		
Switch	3	SWIN1	Brown		
& Wiegand	4	GND	Gray		
	5	W-DATA0	Green		
	6	W-DATA1	White		
	7	W-GND	Black		
Network	8	ERX -	Yellow		
	9	ERX +	Blue		
	10	ETX -	Orange		
	11	ETX +	Pink		
Relay	12	Relay Normal Close	Orange (White String)		
	13	Relay Common	Green (White String)		
	14	Relay Normal Open	Gray (White String)		
Power & RS485	15	Power 12V	Red		
	16	Power Ground	Black		
	17	RS485 Ground	White (Black String)		
	18	RS485 +	Blue (White String)		
	19	RS485 -	Yellow (Black String)		

### 6.4.2 Installing the bracket

 Fix the bracket to the place where BioLite Net is to be installed using the fixing screws.

If the installation place is on concrete, drill holes, insert knife blocks into the holes, and fix them by using fixing screws.

2. Install BioLite Net on the bracket.

**3.** Fix BioLite Net and the wall mount bracket by rotating the star-shape screw by the hexagonal wrench.

Note



( OK )





The extension bracket (Option) is provided for wiring aid according to the installation environment. Remove the basic bracket on the body for use of this bracket





\*\*RS-485 is used for connecting to another device (e.g. PC, BioStation, BioEntry Plus, BioLite Net, Secure I/O, etc.).

For power supply, use a product of DC 12V ( $\pm$  10%) and minimum 500mA. To share the power adapter with another device, the required current sum of terminal (500mA) and another device must not exceed the current capacity.

### 6.4.4 Connecting the switch



### 1. Fail safe lock



Note Take care of the direction of the diode.

Make sure to install the diode near to the door lock.

Make sure to use different power supplies for BioLite Net and the door lock. Make sure to install the diode at both ends of the circuit as shown in the figure above in order to protect the relay contact from the reverse current that occurs when the door lock works.



### 2. Fail secure locks



Note Take care of the direction of the diode.

Make sure to install the diode near to the door lock.

Make sure to use different power supplies for BioLite Net and the door lock. Make sure to install the diode at both ends of the circuit as shown in the figure above in order to protect the relay contact from the reverse current that occurs when the door lock works.

### 3. Automatic door







### 6.4.7 Connecting Wiegand



When BioLite Net is used for Wiegand output device

When BioLite Net is used for Wiegand input device

Туре	Name	Min.	Тур.	Max.	Notes
Power	Voltage (V)	10.8	12	13.2	Use regulated DC power adaptor only
	Current (mA)	-		250	
Switch Input	VIH (V)	-	TBD	-	
	VIL (V)	-	TBD		
	Pull-up resistance ( $\Omega$ )	-	4.7k	-	The input ports are pulled up with 4.7k resistors
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



# 6.5 Specifications

ltem	Specification		
CPU	400MHz DSP		
Fingerprint sensor	500dpi optical sensor		
User capacity	5000 users (2 fingerprints per user)		
Log capacity	50,000 events		
Matching speed	Less than 1 second		
Operation mode	Fingerprint, Password, Fingerprint + Password, Card		
Internal relay	Deadbolt, EM lock, door strike, automatic door		
TTL I/O	2 inputs for exit switch and door sensor		
Wiegand In/Out	1 Port (Wiegand Input or Wiegand Output is used according to the configuration.)		
LCD	128 x 64 Graphic LCD (Monochrome)		
Keypad	3x4 keypad, 3 navigation keys		
IP rate	IP65 Class		
Operation Temperature	-20°C~ 50°C		
Rated Voltage	DC 12V (Min. 500mA and above) (When sharing the power with a device such as electric door lock, enough power is required considering the power requirement for the connected device.)		
Supportable Cards	125kHz EM4100 Card (BioLite Net EM) 13.56MHz Mifare Card (BioLite Net)		
Size	60 x 185 x 40 mm (Width x Height x Depth)		
Certified	KCC, CE, FCC		
## Mechanical Specifications









## 6.6 FCC Notice

This equipment has been tested and found to comply with the limits for 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, uses 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 guarantee 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: ·

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operated the equipment under FCC rules.



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