

FB1000 & FB1200 Series User Manual

Version: 1.0

Date: June, 2015

1. Introduction

1.1 Features

- Automatic system detection when power on
- LED light for lane indication
- Advanced sensor system
- Audible and visible alarm
- Fire alarm integration
- Optional counter
- Flap release when power off (optional with backup battery)
- Flexible reader installation plate

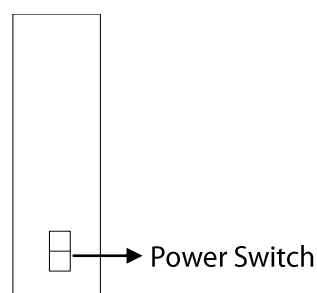
1.2 Specifications

| | | | |
|-------------------|--|------------------------|--|
| Dimension (mm) | L = 1400, W = 300, H = 1008 (FB1000 Master / FB1000 Slave / FB1200) | Packing Dimension (mm) | FB1000: L = 1500, W = 410, H = 1100 (FB1000 Master / FB1000 Slave / FB1200) |
| Net Weight | FB1000: 156kg (Master+Slave) | Power Supply Input | AC 100V ~ 240V, 50Hz ~ 60Hz |
| | FB1200: 103kg | | |
| Flap Width | 260mm | Power Supply Output | 24V ~ 5A, 12V ~ 3A |
| Interface | Dry Contact | Power Rate | Idle 30W, working 80W |
| Open / Close Time | 1s | Capacity | 25 ~ 30 /minute |
| Working Temp. | -28 °C ~ 60 °C | Working Humidity | 5% ~ 80% |
| Sensor | 6 | Working Environment | Indoor / Outdoor (with shelter) |

2. Test Before Installation

Process

- ① Power on the device with AC 110V/220V (Notice: the earth must be connected).
- ② Wait 30 seconds until the device finishes self-detection.
- ③ Check the flap opening in both directions, and check the LED. If it works fine, start installation.



Picture 2-1

3. Installation

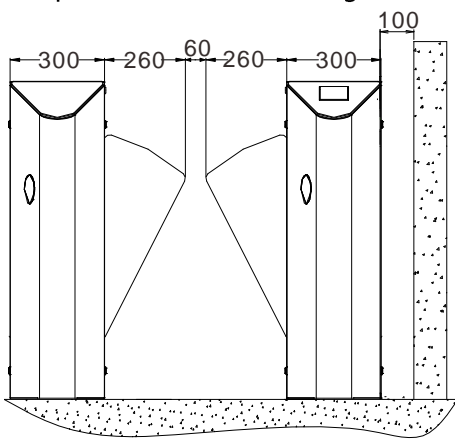
3.1 Conditions and the Location

The installation base must be solid to ensure that the expansion screws are well mounted to fix the devices.

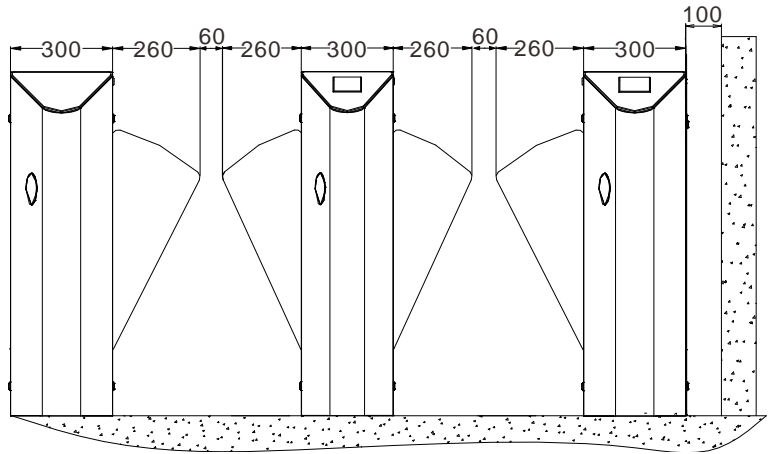
Confirm the installation position.

FB1000 is only for one-lane use. For two-lane or more, please combine FB1000 and FB1200.

If the flap barrier is close to the wall, a space of 100mm distance between the device and the wall should be reserved in order to open the cover and change the setting.



Picture 3-1A One Lane



Picture 3-1B Two Lanes

3.2 Wiring

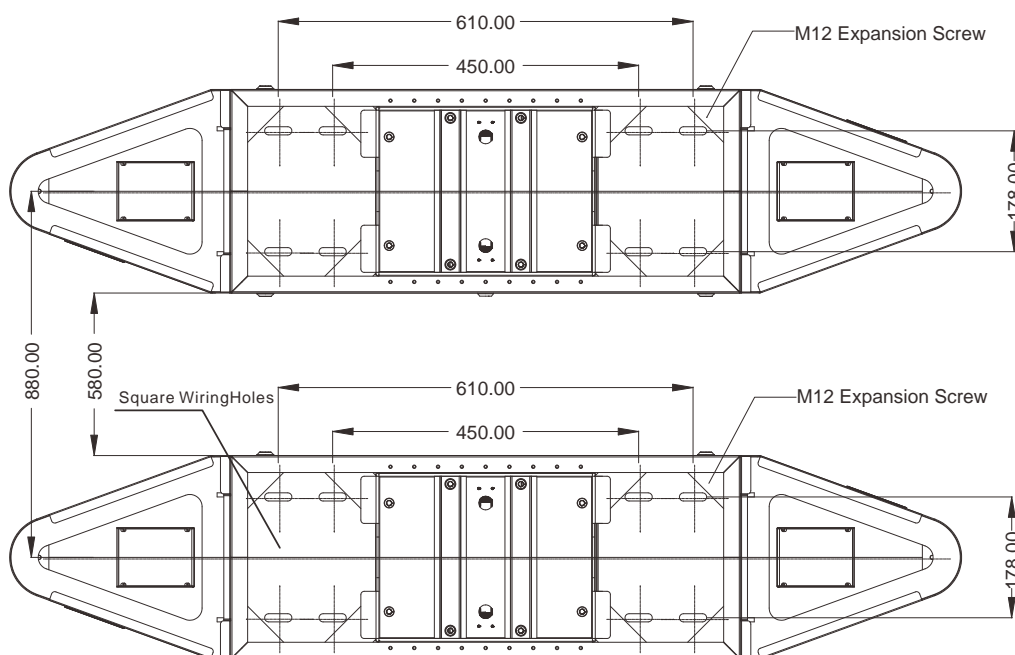
Regarding to the wiring position, please check [picture 3-2](#).

Please use the 3 PINs wire including earth wire for power. In order to avoid jamming between high voltage power wire and communication wire, it is recommended to separate these two kinds of wire in different pipes. The earth must be connected.

3.3 Installation

Process

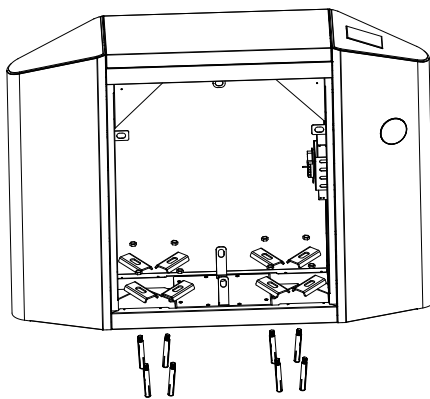
- ① Power on the master device and slave device, ensure the 6 pairs of sensor on both sides are fitted. The distance between two flaps should be 60mm when they are in closed status.
- ② Mark the position of the device and the holes for expansion screws.
- ③ Drill holes on the marked position. The holes should be 14mm diameter and 80mm depth.



Picture 3-2

- ④ Put the glue on the expansion screws and put into the holes. Put the flap barrier device on the proper position. Ensure that the device is horizontally installed.

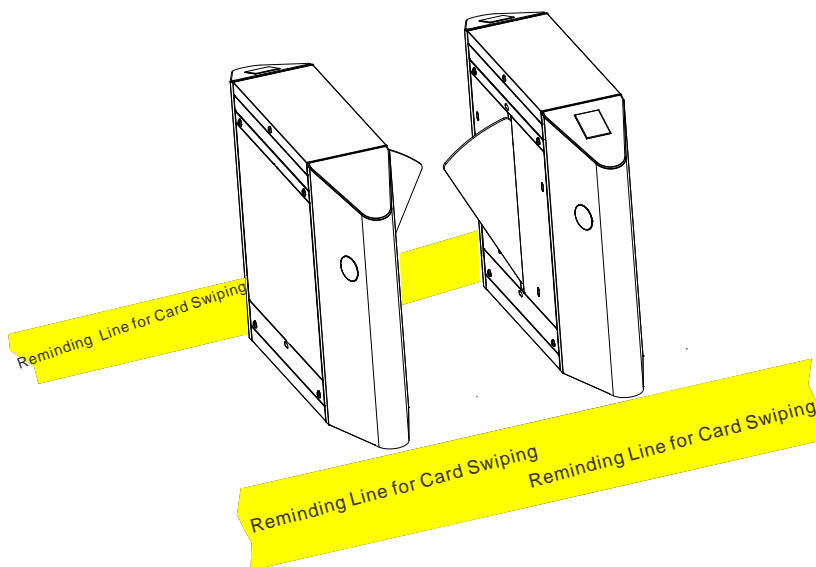
Note: There must be 8 expansion screws for each side.



Picture 3-3

3.4 Set Reminding Line

It is recommended to set the reminding line on the ground. The user will stay out of the reminding line to swipe card or press fingerprint.



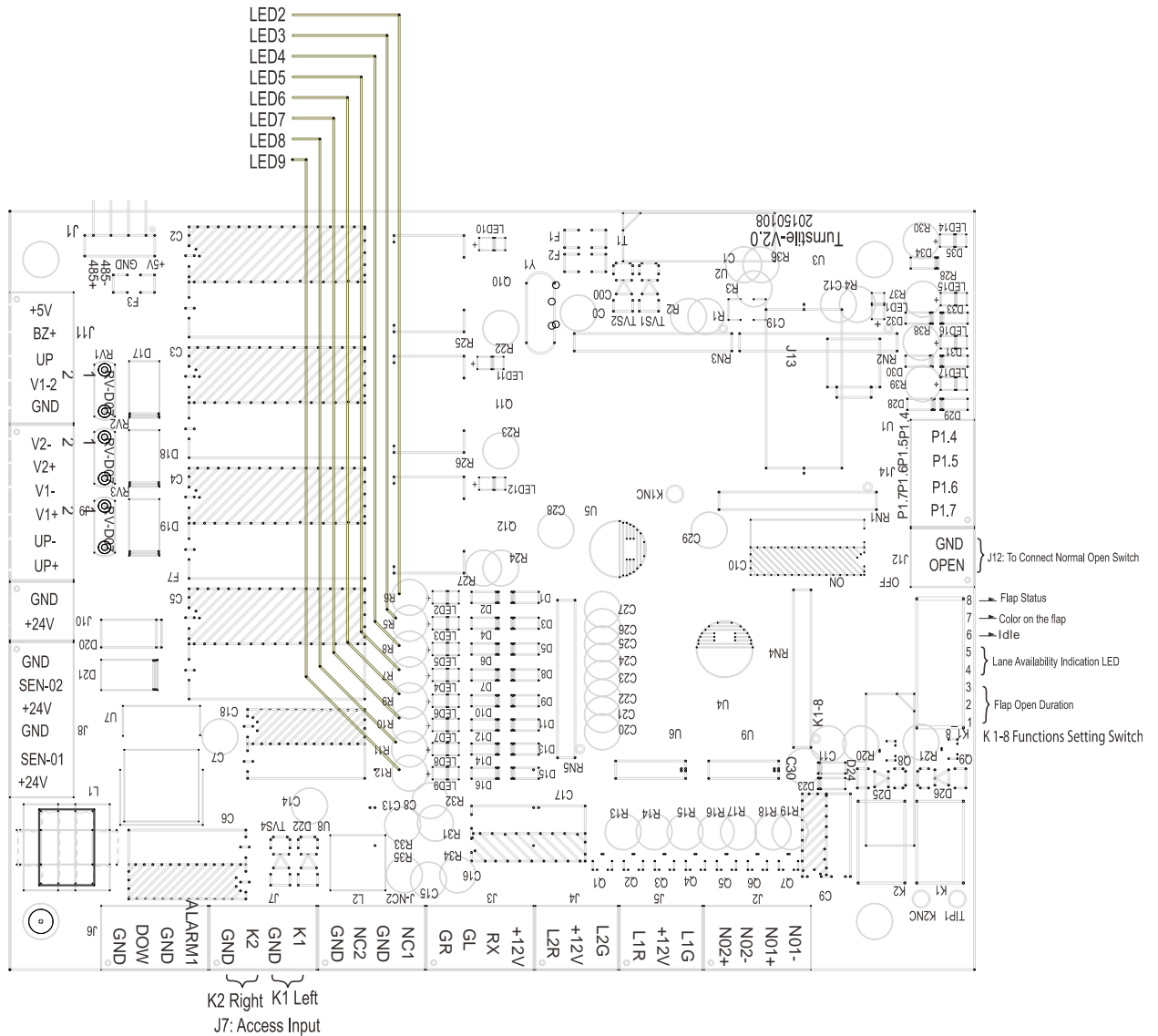
Picture 3-4

4. PCB Wiring

Access control system is already included in FB1011, FB1022, FB1211 and FB1222.

Access control system is not included in FB1000 and FB1200. Third party access control system need to be connected to the integration interface of the flap barrier.

4.1 Flap Barrier Controller Introduction



Picture 4-1

LED3 Alarm Status: The LED is on when there is an alarm.

LED4 K1 Input: The LED is on when K1 input has open signal.

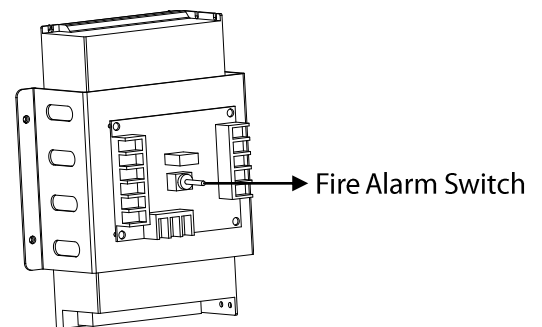
LED5 K2 Input: The LED is on when K2 input has open signal.

LED6 Master Device Close: The LED is on when master device closes.

LED7 Master Device Open: The LED is on when master device opens.

LED8 Slave Device Close: The LED is on when slave device closes.

LED9 Slave Device Open: The LED is on when slave device opens.



Picture 4-2

J7 Access Input: Flap opening input interface, receive dry contact signal to open the flap. There are two pairs of input for both in and out. That means access control system need two relays to indicate in and out.

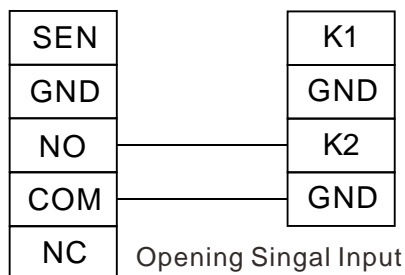
J12 Fire Alarm Switch: When the device choose optional backup battery, there is one switch on the board to choose different working mode. Open mode means when power is off, open the flap. Normal working mode means when power is off, use the battery to make the flap barrier working as normal. (Picture 4-2)

4.2 Wiring Between Master and Slave Device

There are three 6-conductor cables. All the conductor should be well connected to make sure the device works fine. The color of the wiring between master and slave device are as following table.

| | | | | | | | | | | | | | | | | | | | | |
|--------------------|--------------|---|---|---|---|---|------------|---|---|----|----|----|--------------|----|----|----|----|----|----|----|
| NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Color of conductor | R | B | G | W | Y | O | R | B | G | W | Y | O | R | B | G | W | Y | O | | |
| Color of the wire | Black (6PIN) | | | | | | Red (6PIN) | | | | | | Green (6PIN) | | | | | | | |

4.3 Connection between Access Control System and Flap Controller

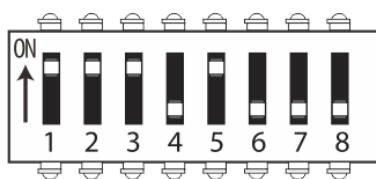


Note: The access control relay open duration should be no more than 1 second.

Access Control System

Picture 4-3

4.4 DIP Switch K1-8 Setting



Picture 4-4

| No. | K1-1 | K1-2 | K1-3 | K1-4 | K1-5 | K1-6 | K1-7 | K1-8 |
|----------|--------------------|------|------|----------------|------|----------|----------------|-------------|
| Function | Flap open duration | | | Lane direction | | Reserved | Flap LED color | Flap status |
| Default | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |

4.4.1 Flap Open Duration

Flap barriers will be opened after receiving open signal from access control system. The flap open duration refers to the opening time of the door without passer-by.

Use the K1-1, K1-2, K1-3 to set this open duration.

| Value | Flap Open Duration | Value | Flap Open Duration |
|-------|--------------------|-------|--------------------|
| 111 | 5s | 011 | 30s |
| 110 | 10s | 010 | 40s |
| 101 | 15s | 001 | 50s |
| 100 | 20s | 000 | 60s |

4.4.2 Lane Availability Indication LED

Use the K1-4 and K1-5 to set the LED for indicating the status of the lane. Green arrow indicates available. Red cross indicates not available.

| K1-4 | K1-5 | Lane Status |
|------|------|-------------------------------|
| 0 | 1 | Two direction available |
| 1 | 0 | One direction available (In) |
| 1 | 1 | One direction available (Out) |

4.4.3 Color on the Flap

Default color can be set on the flap.

| K1-7 | Color |
|------|-------|
| 0 | Green |
| 1 | Red |

4.4.4 Flap Status

| K1-8 | Flap Status |
|------|-------------------|
| 0 | Flap normal close |
| 1 | Flap normal open |

Appendix 1 Default Setting

| Category | No. | Function | Default Setting |
|----------------|-----|---------------------|---|
| Access Control | 1 | Lock Open Duration | 1s |
| | 2 | IP | 192.168.1.201 |
| Flap Setting | 1 | Flap Open Duration | 5s (K1-1=1, K1-2=1, K1-3=1) |
| | 2 | Lane Indication LED | Available in both directions (K1-4 = 0, K1-5 = 1) |
| | 3 | Color on the Flap | Green (K1-7=0) |
| | 4 | Flap Status | Normal Close (K1-8 = 0) |

Appendix 2 Connection Diagram among Boards

Connection between PCB boards of Flap barrier controller

| A board | B board |
|---------------------|---------------|
| J11 | J-OTHER |
| J9 | J-MD |
| J6 (DOW and GND) | P3 |
| J6 (ALARM1 and GND) | J-P2P1 |
| J14 (P1.5 and P1.6) | J-P2P1 and P3 |

