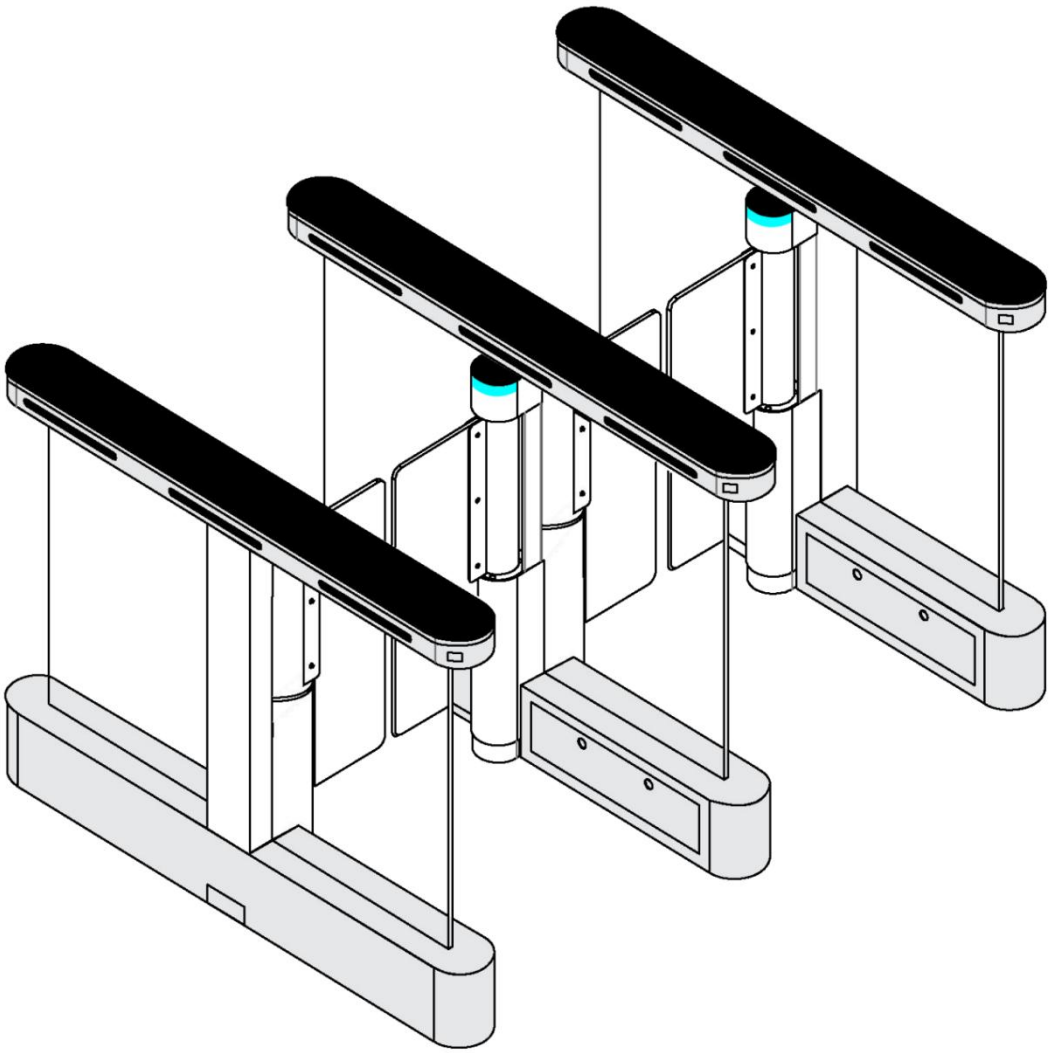
BRYCO

User Manual

SWB310

Automatic Fast Speed MAG Swing Barrier



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Release date: Feb 2023

TÜV NORD ISO 9001

STANDARDS MALAYSIA ACCREDITED
ACB QMS 05
MS No.: 05 100 20010

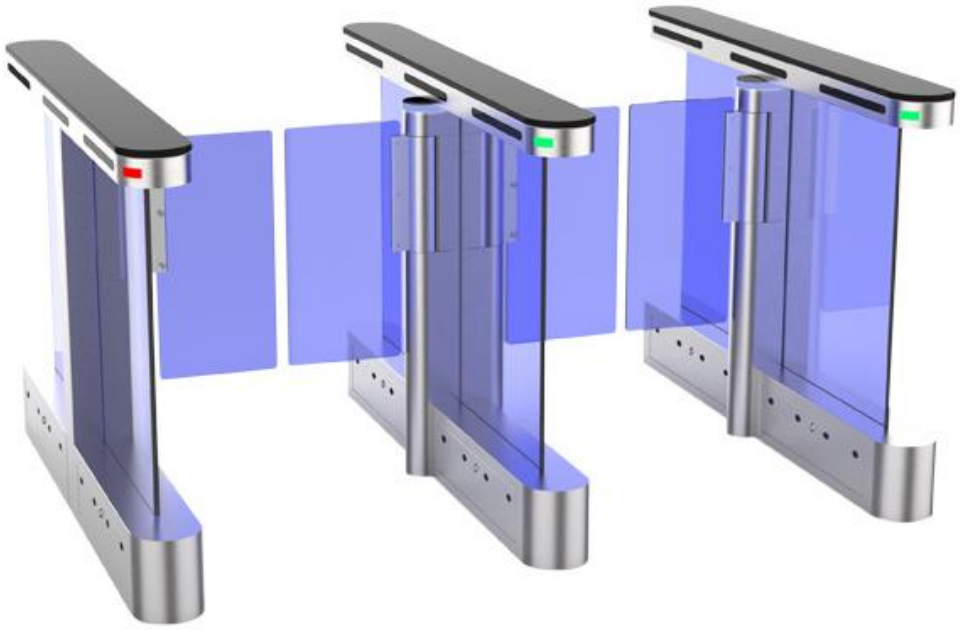
MAG.COM.MY

Contents

Overview

MAG SWB310 is swing barrier designed to be slimmest of all pedestrian gate. Slim form factor save space and allow you to put more gates to digest higher traffic. Stylish design with High speed motor is used to achieve premium looks and faster pass through rate. SWB310 offer wide and full clearance opening to allow pedestrian with luggage to pass through with comfort.

MAG SWB310 is suitable for indoor application only. It is NOT suitable to be installed outdoor . They are optimized for higher traffic solution with stylish design to elevate premium atmosphere of any building lobby



Features

- **Minimum Maintenance,** Use latest brushless DC motor with precision technology and improved gear that eliminate the need of changing carbon brush this reducing maintenance work.
- **Double safety,** Door will automatically reverse once safety IR detected obstacle or when a small force is detected blocking its motion. This prevents injury caused by door hitting people.
- **Multiple access memory.** If there are 3 person flashed card, gate will count 3people to pass through before close the door.
- **Emergency evacuation,** During power failure, door panel will open automatically to allow free pass through. In the event of emergency such as fire alarm, swing barrier can be manually triggered to open permanently to allow fast evacuation..
- **Elegent Design,** Slim form factor, premium stainless steel and glass panel material with elegant arc design effectively help create an welcoming and elegant prestigious atmosphere at building entrance to impress your visitors.

- **Alarm notification**, High performance IR sensor is used to detect potential attempt of tail-gating, illegal passing and pass through direction.

  a) Detect second person tailgating behind the first person at minimum 10 cm distance coming from same direction.

  b) Detect second person coming from opposite direction.

  c) Detect first person did not flash card and attempt to go in

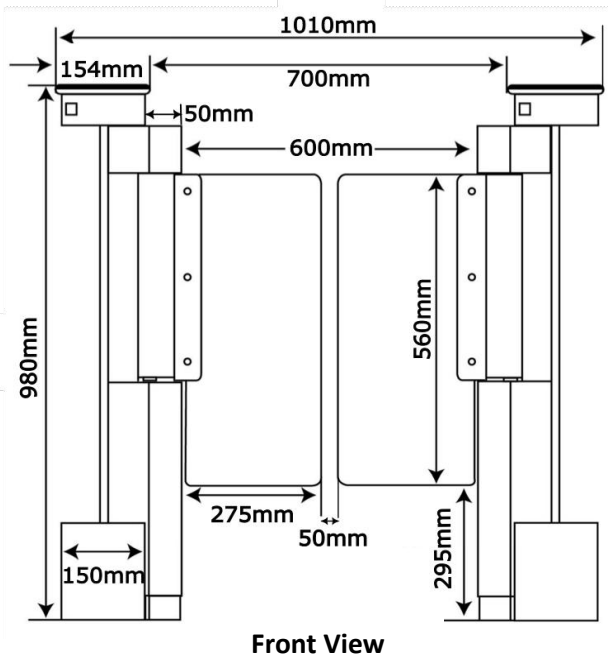
Technical Parameters

Description	Parameters
Body Material	Acrylic Glass, SS304 Stainless Steel, 1.5mm
Door Dimension (Single Panel)	275mm(W) x 560mm(H)
Door opening / closing speed	Programmable 0.4 to 1.5 sec
Optimal flow rate	20 to 25 people per minute
Power supply	AC220/110V±10%, 50/60Hz
Power Consumption	40w
Motor	DC Brushless Motor, 140W/24V
Input Connection	Dry contact pulse > 500ms
Working environment	Indoor only
Working Temperature	-15℃ - 60℃
Relative Humidity	≤ 90%
Passage Width	600mm
Gate Door Material	12mm acrylic
Cabinet Dimension	1400(L) x 1010(W) x 980(H) mm
IP Rating	IP 52

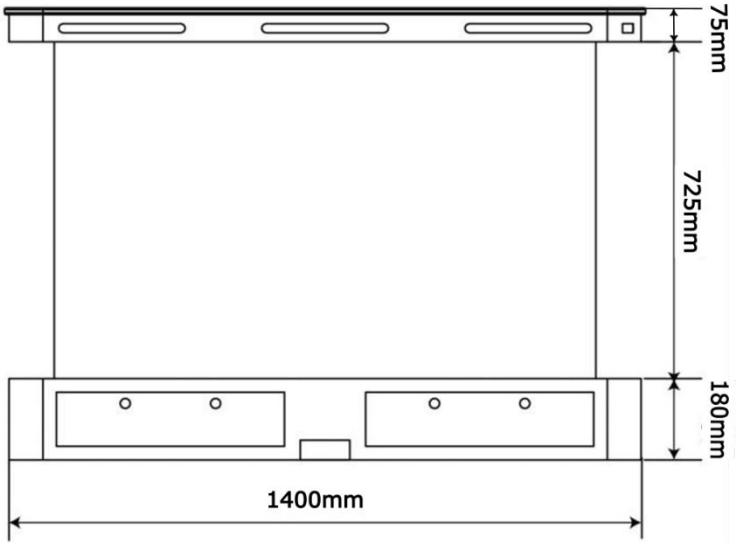
Precaution

- In case of emergency, isolate the power from the power supply.
- Improper installation can create danger (such as electric shock or fire).Please engage specialist for the proper installation work.
- Do not install the barrier in a potentially explosive atmosphere.
- Do not operate with wet hands.
- If abnormal condition (burnt smell. Etc) occurs, switch off the power supply.
- Do not operate barrier exposed to direct sunlight when cover open.
- Strictly indoor or well shaded outdoor application.
- NOT Water proof.

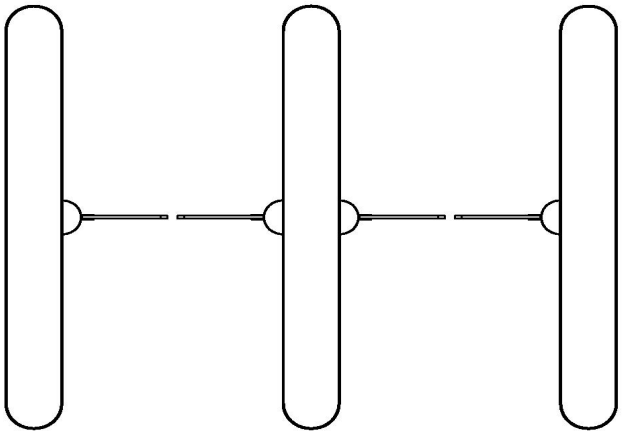
Dimension



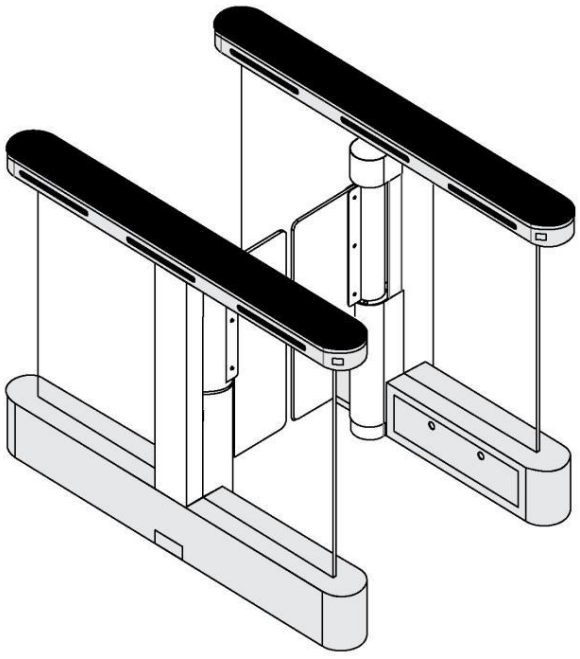
Front View



Side View



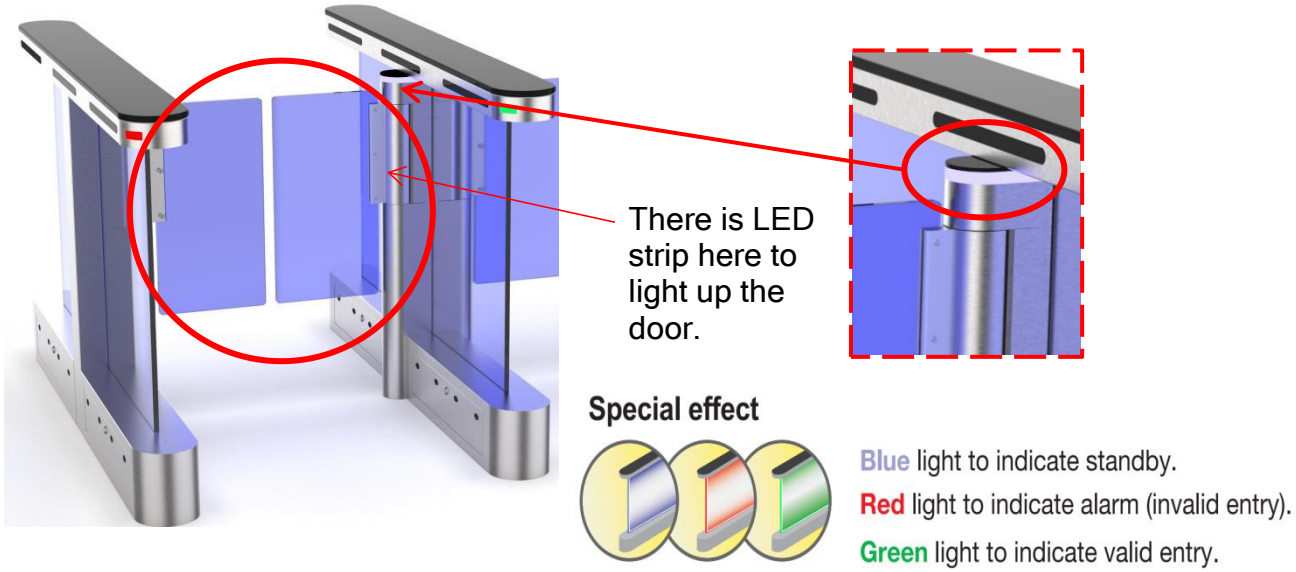
Top View



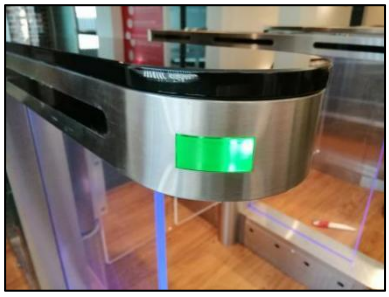
Actual View

Led Indicator

SWB310 With Door Indication Light and Middle LED Indication Light



Side LED Light



Toggle switch to change Green or Red light.

The Side LED Light is static. It will not change from green to red when someone flash card to pass throught the SWB310.

When do we need to use green light and when to use the red light?

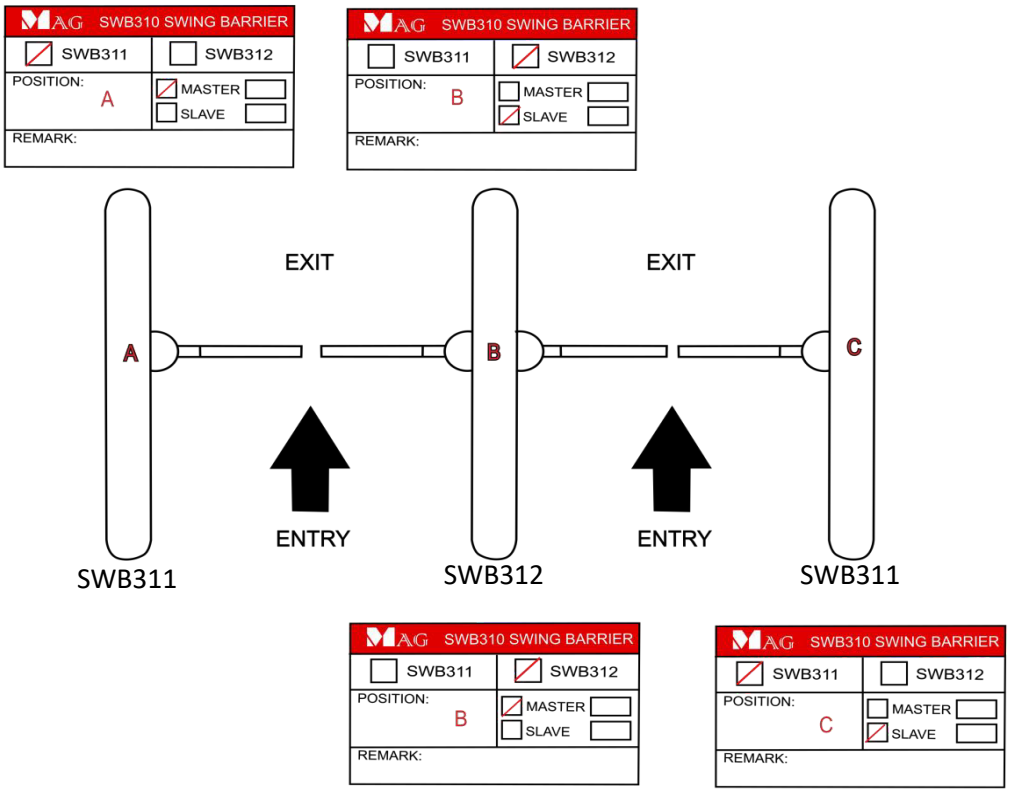
Green light is to indicates that the lane is ready for passing through.

Red light is to indicates that the lane is not allowed for passing through.

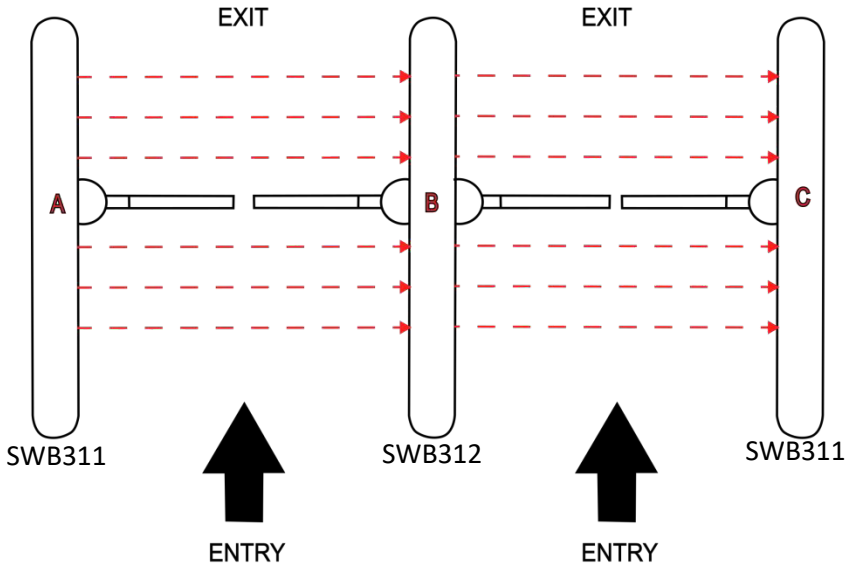
Installation

Swing Barrier position arrangement

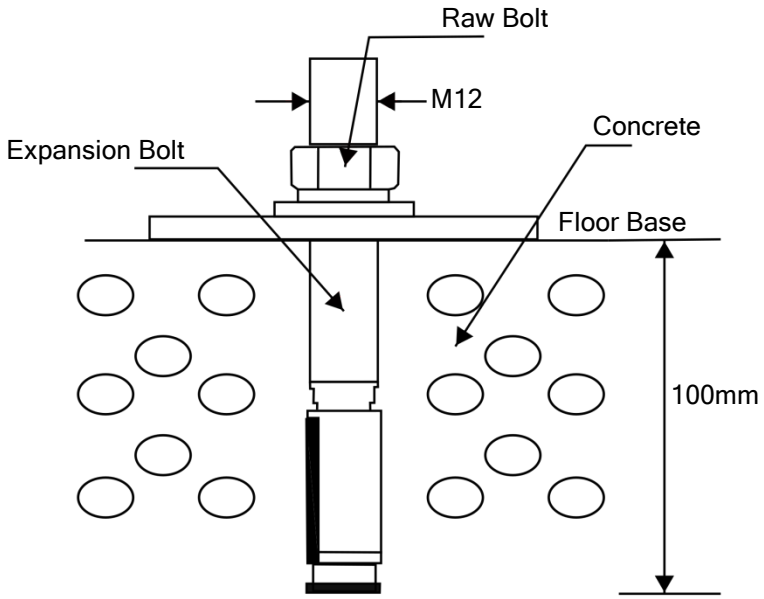
I. Arrange the swing barrier position according to the label on the package



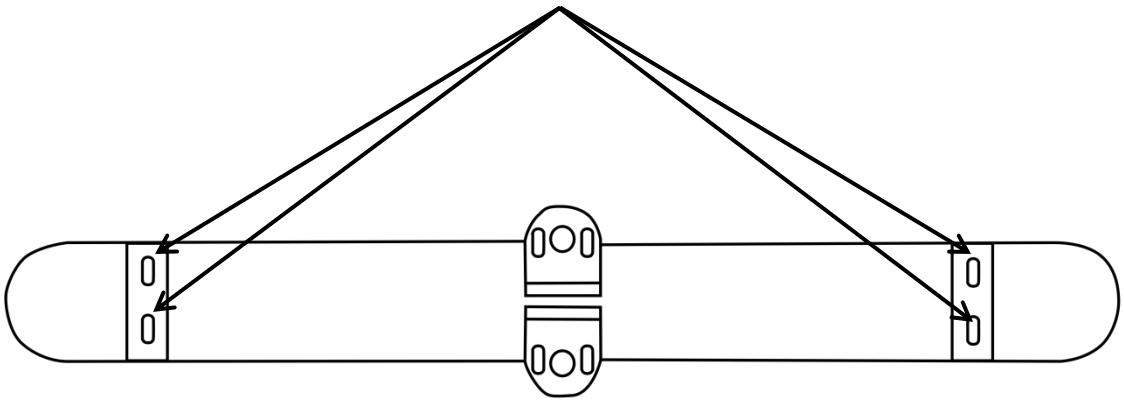
II. Align swing barrier properly according to diagram, make sure IR sensors are aligned with each other



III. Use raw bolt to clamp the swing barrier base to the floor. Installation for the raw bolt is shown in the diagram below.

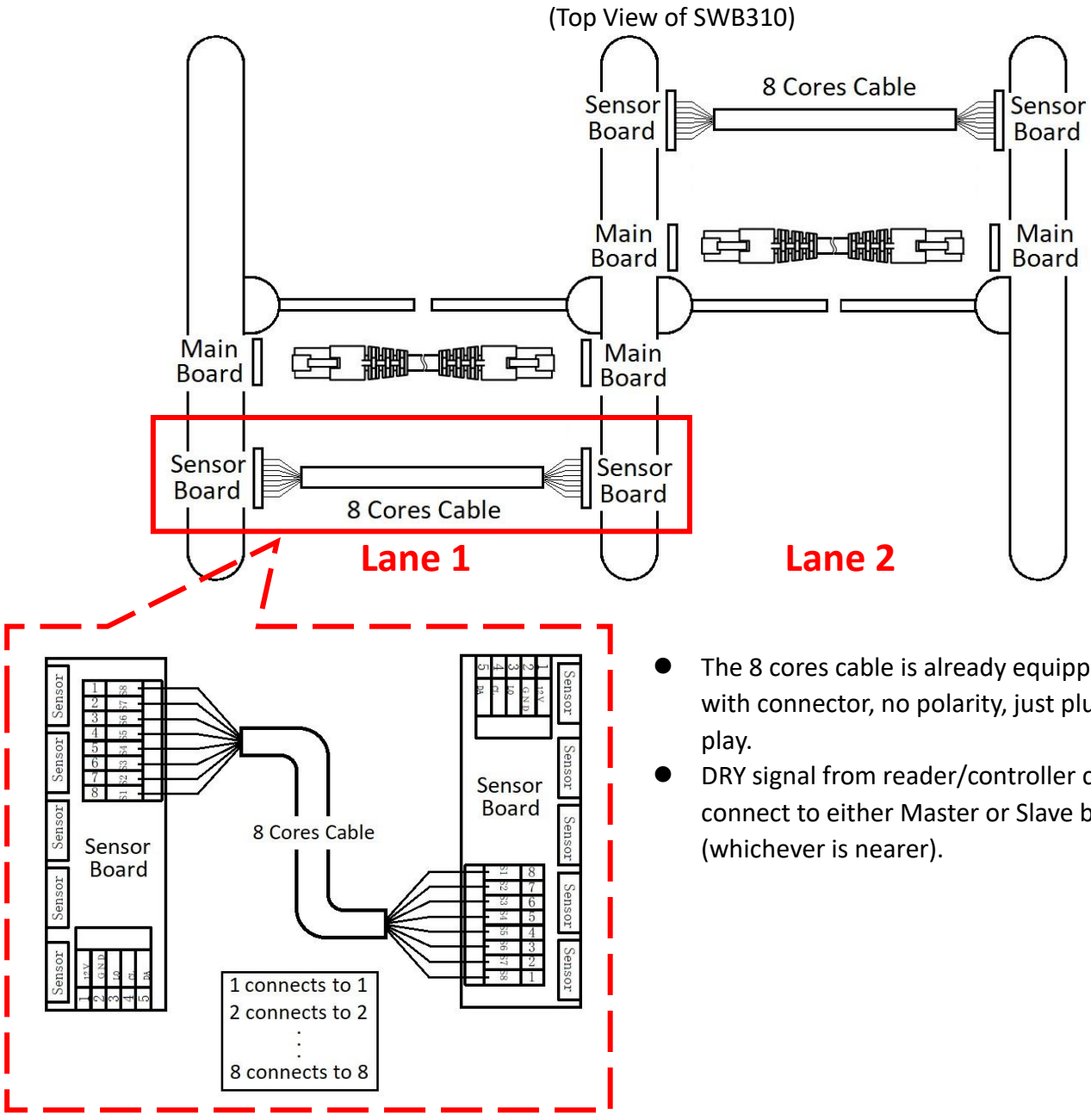


Hole for install expansion



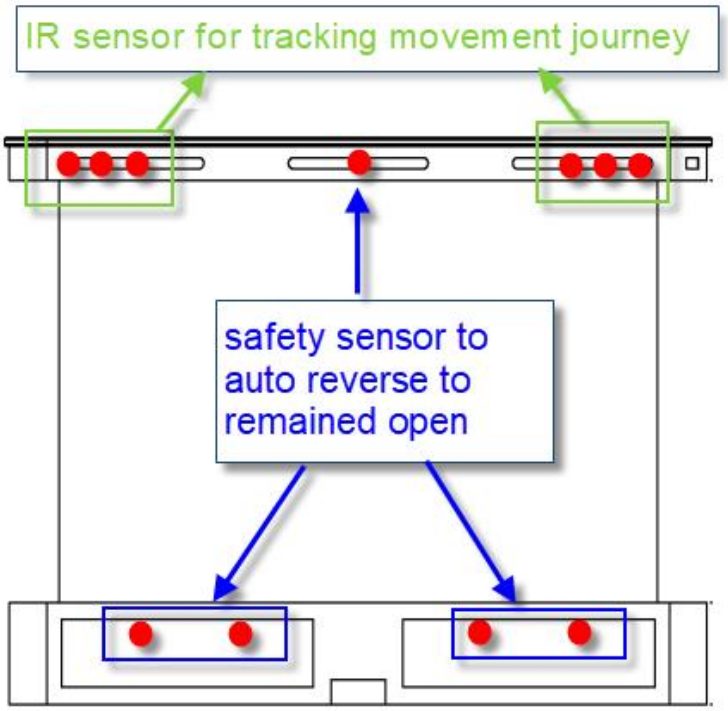
Wiring Connection

Synchronization wiring for SWB310

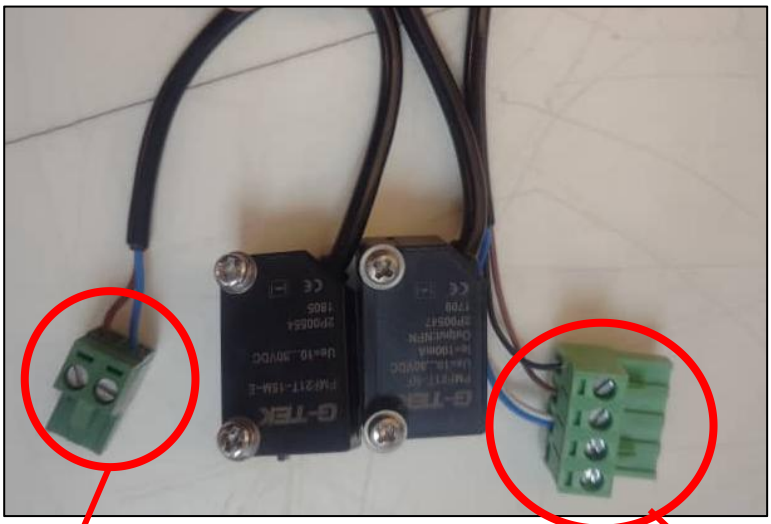


- The 8 cores cable is already equipped with connector, no polarity, just plug and play.
- DRY signal from reader/controller can connect to either Master or Slave board (whichever is nearer).

SWB310 IR Sensor Layout



Side view



Sensor with 2 wires
is the TX sensor.

Brown wire = +12V
Blue wire = GND

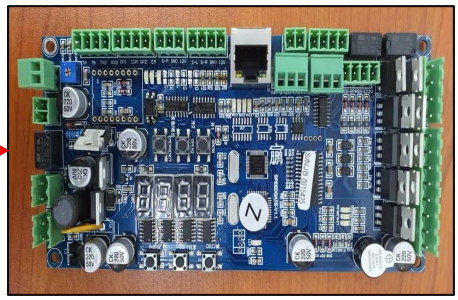
Sensor with 3 wires
is the RX sensor.

Brown wire = +12V
Blue wire = GND
Black wire = Signal

Signal Flow Diagram

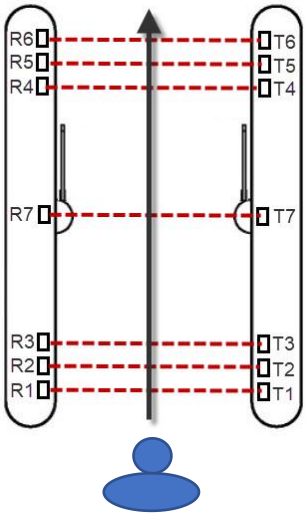
1) Flash a valid card on the reader.

2) Controller will send a DRY contact signal to Main Board.



3) Main Board will send voltage output to the Brushless DC Motor to open door.

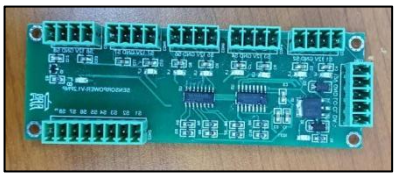
4) Motor will rotate the shaft to open the door.



5) IR sensors detect the user passing through.
By the sequence from R1 to R6.

Sensor Board (Top)

6) IR sensor signal will be transfer from Top sensor board to Bottom sensor board.

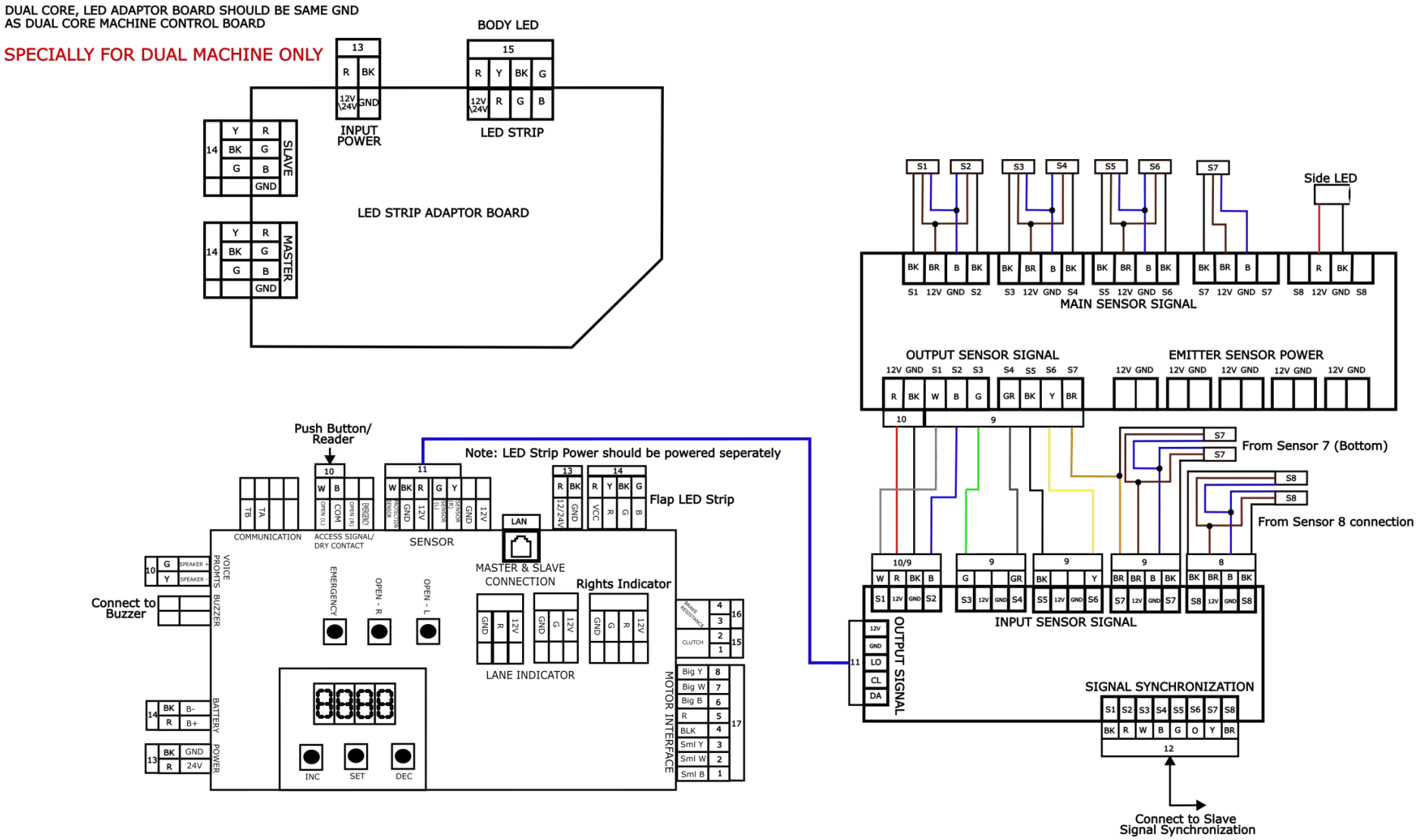


Sensor Board (Bottom)

7) Bottom sensor board will send signal back to main board after user has pass through R6.

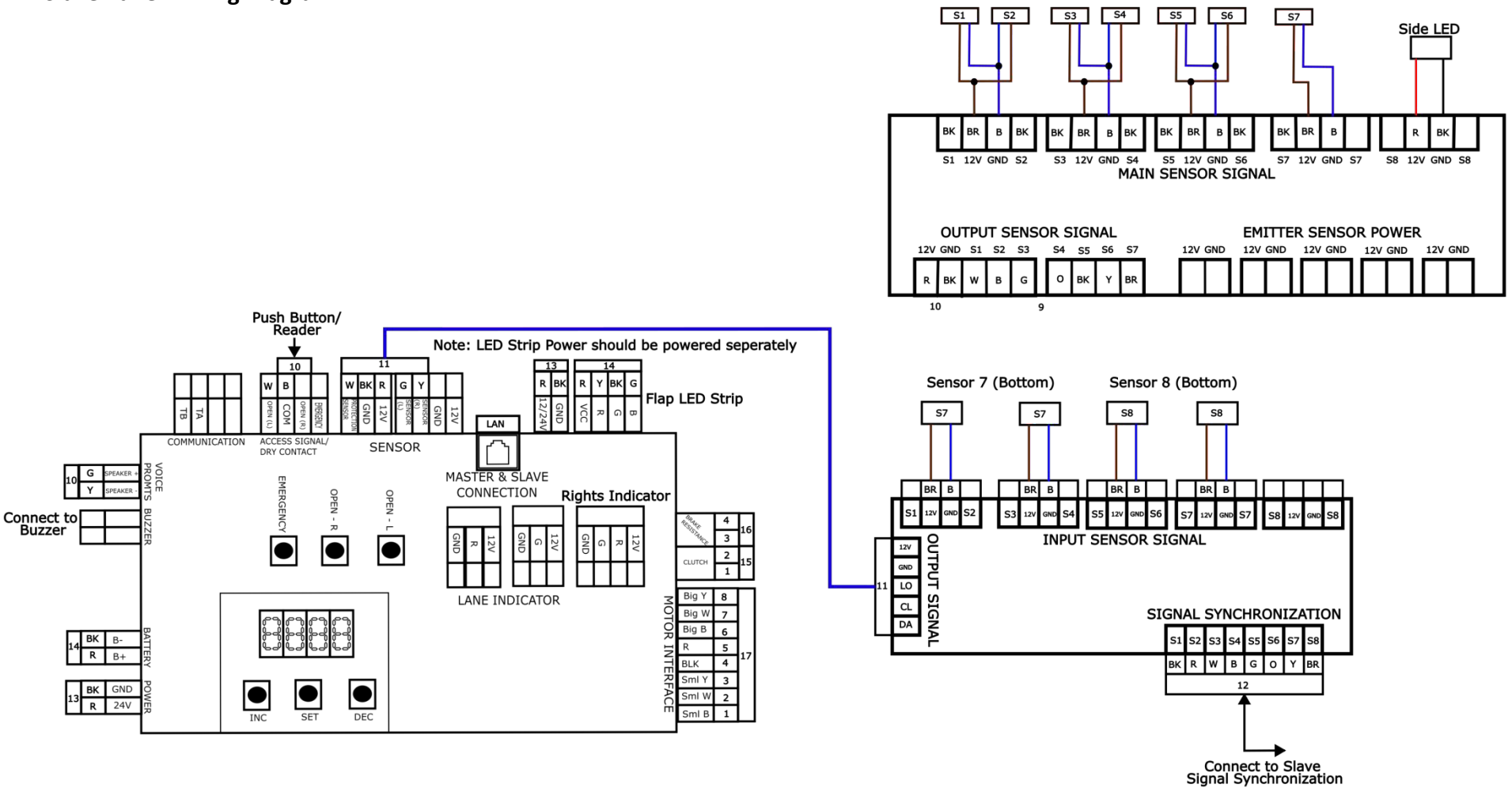
8) Main Board will send voltage output to the Brushless DC Motor to close door.

Master Panel Wiring Diagram



Note: Control panel don't have any settings for Master and Slave, the difference is connection on sensor only. Two machine is communicated by CAT6 (LAN) wire to receive synchronize signal

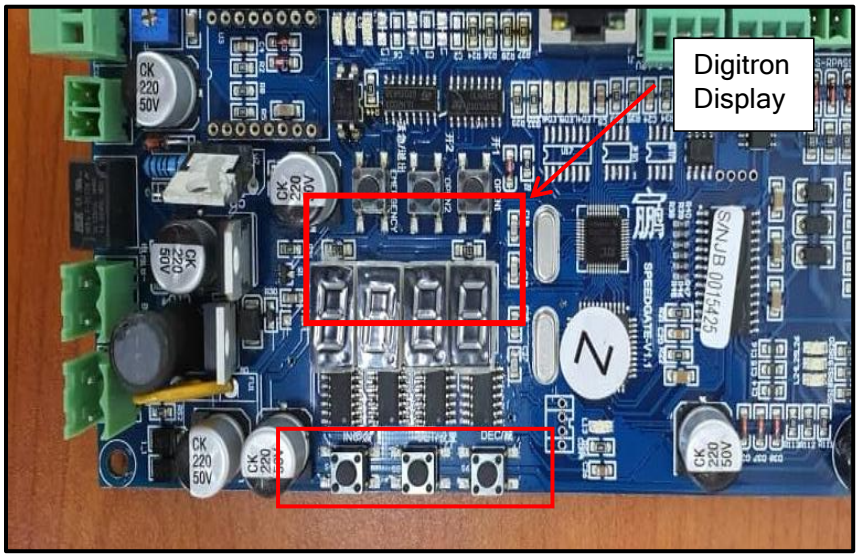
Slave Panel Wiring Diagram



Note: Control panel don't have any settings for Master and Slave, the difference is connection on sensor only. Two machine is communicated by CAT6 (LAN) wire to receive synchronize signal

Parameter Setting Descriptions

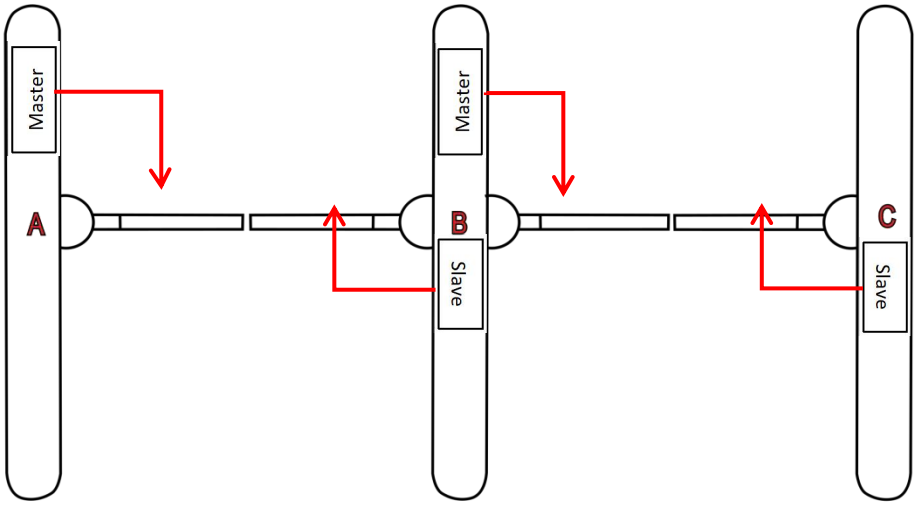
Function setting using buttons on the main board



To enter menu setting, press “SET” button once, the digitron display will show [P00]

Press ”INC” or “DEC” to move to different settings. [LP01] to [LP09], [DP01] to [DP09].

To exit menu setting, return back to [P00] then press “SET” key to exit



*Note: Each Main board is control each door and need to program for both side

LP Settings (Applicable for Master and Slave Control Board)

1) [LP01] - Product Operation Mode set to NC (DO NOT change, default : 01)
2) [LP02] - Operation Mode Settings control by both enter and exit (DO NOT change, default : 00)
3) [LP03] - Voice over for Entry and Exit, currently not use (DO NOT change, default : 01)
4) [LP04] - Setting read card without memory or not(DO NOT change, default : 03)
5) [LP05] - Operation Mode (Normal : 00 / Testing : 01) (DO NOT change, default : 00)
6) [LP06] - Effective passing time (Time for the door to close when no passing through, default : 005)
7) 7) [LP07] - Effective signal time (DO NOT change, default : 010)
8) 8) [LP08] - Equipment Address (DO NOT change, default : 000)
9) 9) [LP09] - Not Using

DP Settings (Applicable for Master and Slave Control Board)

1) [DP01] - To control the door swing speed. Press “INC” or “DEC” button to increase or decrease the value from 002 to 016. The higher the value, the faster the door speed. (Default : 10)
2) [DP02] - Auto Bounce when illegal Push (DO NOT change, default : 002)
3) [DP03] - To calibrate arm door position setting.

Enter DP03 menu. It will display L-01, please push arm to middle position (not need exactly), and then press SET button, Digitron will display L-02, and arm will open to end automatically, and then press SET button, Digitron will display L-03, and then push arm to Zero position(middle position which you want it exactly close to), and then press set. And then quit setting.

4) [DP04] - To calibrate arm door with fine tuning. (DO NOT change, default : Set by DP03)
5) 5) [DP05] - Motor Brake Strength (DO NOT change, default : 10)
6) [DP06] - To set the range of door opening (DO NOT change, default : 80)
7) [DP07] - To set the max door opening angle (DO NOT change, default : 88)
8) [DP08] - Door speed after braking, not use. (DO NOT change, default : 02)
9) [DP09] - Setting for clutch normally open/close (DO NOT change, default : 01)

After done setting, press “INC“ or “DEC“ to move to [P00], then press “SET“ to exit from the program mode.

*MUST exit the program mode after done setting, else Swing Gate will not function as normal.

NP Setting (Advance User Setting - Only be set by Authorized Technician)

To Enter the setting, press the INC KEY FOR 2Second, and the Digitron Display shows the NP00.

Note:Please do not operate the Advance User Menu unless at the under of Authorized Technician instruction strictly.

1) [NP01] - Equipment type (DO NOT change the value) {Default value is 1}
2) [NP02] - Menu resume {Default value is P-H}
3) [NP03] - High speed sensitivity setting (DO NOT change the value)
4) [NP04] - Not using
5) [NP05] - Passing through displaying
6) [NP06] - Not Using
7) [NP07] - Gate Forward & Reverse selection (0 or 1)
8) [NP08] - Gate resume setting (DO NOT change the value)

Note: If setting abnormally, there is a higher chance the gate will not working and damage the motor

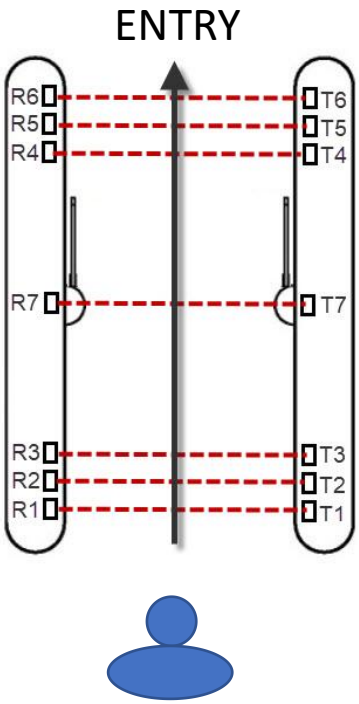
Digitron LED Display

Digitron Display (Normal Operation)	Meaning
STAT(START)	System is starting
RESU (RESUME)	Gate is resume to work
CHAS (CHECK SENSOR)	Sensor checking
CHAR (CHECK RAM)	Engine data testing
DPXX	Menu Displayed
NPXX	No-User Menu Display
LPXX	Logic menu display
SENO (Sensor OK)	No issue with sensor element
SERO (Serial OK)	Communication OK
RUNX (X is the system operation mode and the settings value of LP02)	System operation Mode
TEST	Gate Self-Testing
EGEN (Emergencies)	Gate Open during emergencies
NOPR (No power)	Opening gate when no power

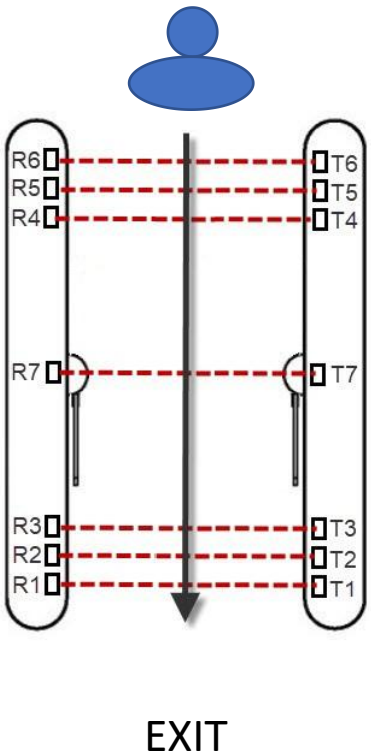
Digitron Display (Error)	Meaning	Solution
E-PL (ERROR PULSE)	Motor default phase	- Check Motor Wiring connection to the main board. Make sure there is a connectivity between main board and Motor.
E-CS	Gate operation overtime	- Gate is open more than the time set - Make sure Wiring connection from motor is connected to the main board - make sure limit sensor is working fine and check wiring connection from limit sensor to main board
E-SXX (“XX” Error Sensor Number)	Abnormal sensing element indication	- Sensor not align between RX and TX sensor. - make sure the sensor is align to make sure TX sensor can transmit signal to RX
E-SL (Error Serial)	Communication Error	- Gate Master and Slave is not sync. - Make sure Sync Serial cable is connected and have connectivity

SWB310 Normal Operation

1) Normal valid card condition for a bi-directional lane.

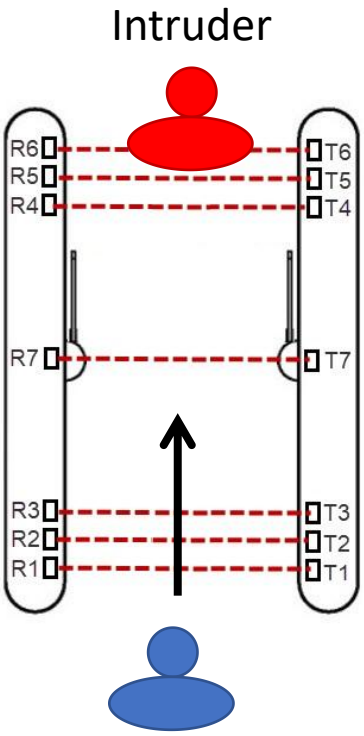


1. User walk through the lane after flash a valid card, triggered the IR sensors.
2. From R1 until R6.
3. Door will be closed after user passed through R6.
4. If user doesn't walk in the lane to trigger R1 within 5 sec, the door will closed back.

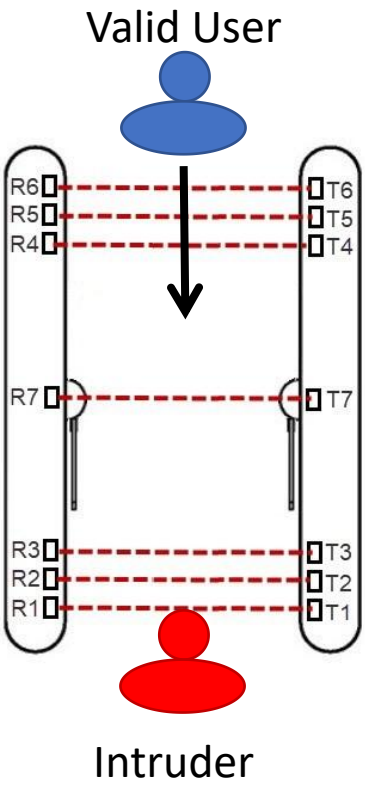


1. User walk through the lane after flash a valid card, triggered the IR sensors.
2.
3. From R6 until R1.
4. Door will be closed after user passed through R1.
5.
6. If user doesn't walk in the lane to trigger R6 within 5 sec, the door will closed back.

2) Intruder wanted to pass the lane from opposite direction.

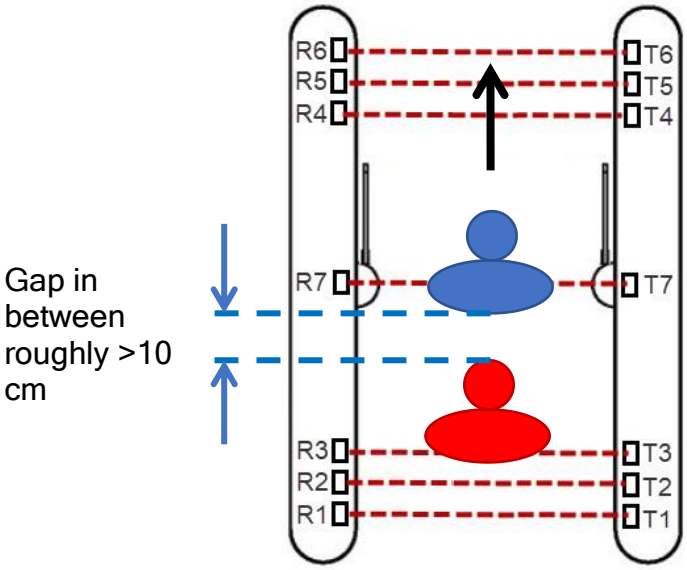


1. Valid User flashed card to enter and the Swing Barrier opened.
2. An Intruder walked in and wanted to pass the lane from the opposite direction.
3. Sensor R6 was triggered.
4. Door will not closed but will trigger alarm.



1. Valid User flashed card to exit and the Swing Barrier opened.
2. An Intruder walked in and wanted to pass the lane from the opposite direction.
3. Sensor R1 was triggered.
4. Door will not closed but will trigger alarm.

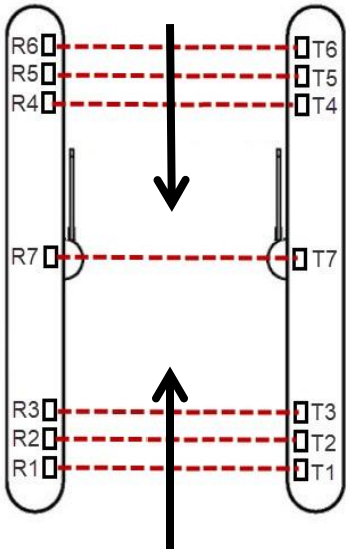
3) Tail-gating alert.

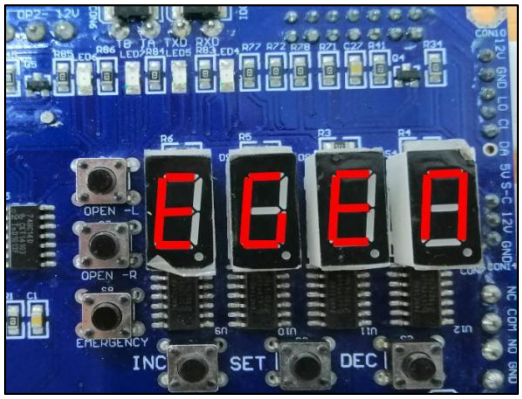


1. User 1 (blue) has flashed card and entered the lane.
2. User 2 (red) without access card is tail-gating User 1 to enter the lane.
3. SWB310 will trigger alarm buzzer and red light whenever detects 2nd person is tail-gating the 1st person.

Note: If the 1st and 2nd person's gap is less than 10cm, IR sensors will not be able to detect as 2nd person. Hence, no alarm triggered.

4) Fire alarm mode.

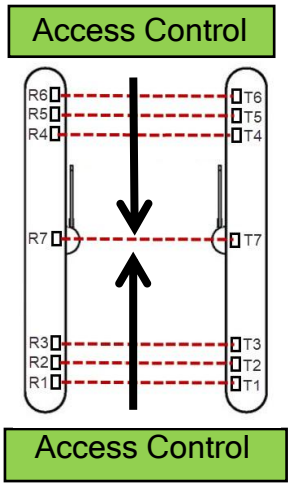




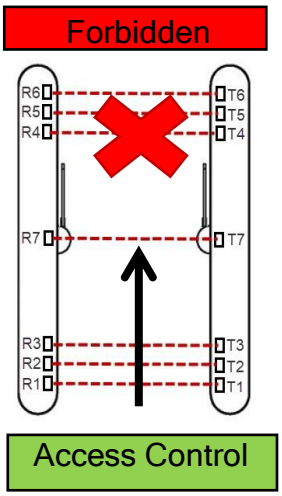
The display on the main board will show EGEN.
This indicates “Emergency”.

- Must connect a signal cable from the building fire alarm to SWB310.
- Fire alarm signal to SWB310 must be a DRY contact.
- When fire alarm system triggered, SWB310 will open the door automatically.
- The door will stay opened as long as the fire alarm signal still turning on.
- The door will close back automatically when the fire alarm signal has turned off.

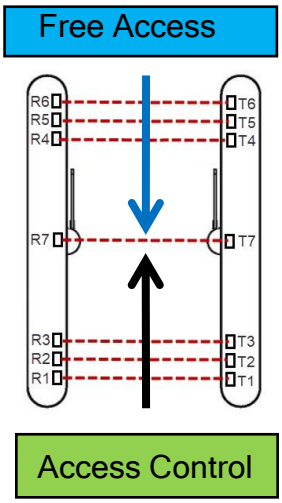
5) SWB310 can be programmed to to suit different types of passing mode.



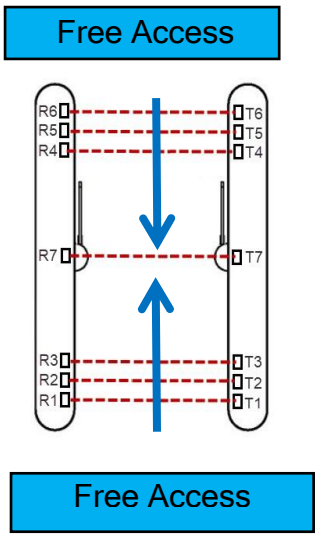
Both Entry & Exit using access control system to enter.



One side using Access Control to enter. The other side No Entry.



One side using Access Control to enter. Ther other side free access.



Both Entry & Exit free access.

Version Upgrade

Current Version	Improvement	Release date
V1	- New manual interface	February 2023

***Product performances is based on testing in a controlled environment. Your result may vary due to several external and environment factors.**