

# DBX100



## Dropbox Card Collector



### Product Safety Precaution:

- 1) In case of emergency, isolate the power from the power supply.
- 2) Improper installation can create danger (such as electric short or fire).  
Please engage specialist for the proper installation work.
- 3) Do not install the turnstile in a potentially explosive atmosphere.
- 4) Do not operate with wet hands.
- 5) If abnormal condition (burnt smell. Etc) occurs, switch off the power supply.
- 6) Do not operate turnstile exposed to direct sunlight when cover open.
- 7) Do not install turnstile at sea side.
- 8) Strictly indoor or well shaded outdoor application.
- 9) **NOT Water Proof.**

## General Description

**DBX100** is a dropbox type card collector. User can drop their visitor card into the dropbox to gain access for exit or entry. DBX100 can be integrated with any access control reader.

**DBX100** slim and small profile makes it easier to be used side-by-side with other pedestrian gate and building entrance.

**DBX100** design is simplified to achieve highly affordable solution for ticketing and visitor management system.

## Application

MAG DBX100 is suitable for indoor application only. It is **NOT** suitable to be installed outdoor or near sea side.

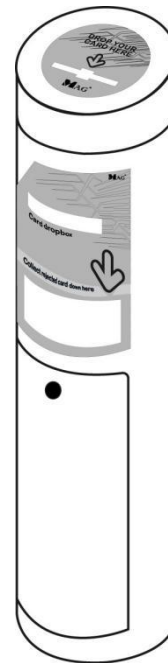
## Features

**Flexible card size.** Can support maximum card width up to 10cm. DBX100 can take in entire card with card holder and pin clip.

**Can be integrated with VMS & access control.** Any proximity reader can be installed inside the dropbox. Access reader just needs to provide dry contact output to trigger dropbox to accept the card. Valid visitor card will be accepted into collection bin and open the gate when you integrate with your access control system. Invalid visitor card will be falls out to exit tray at front.

**User friendly & easy operation.** Green light indicates the card is valid and card fall in collection box. Red light when fully occupied and the card will be rejected and falls out to exit tray in front.

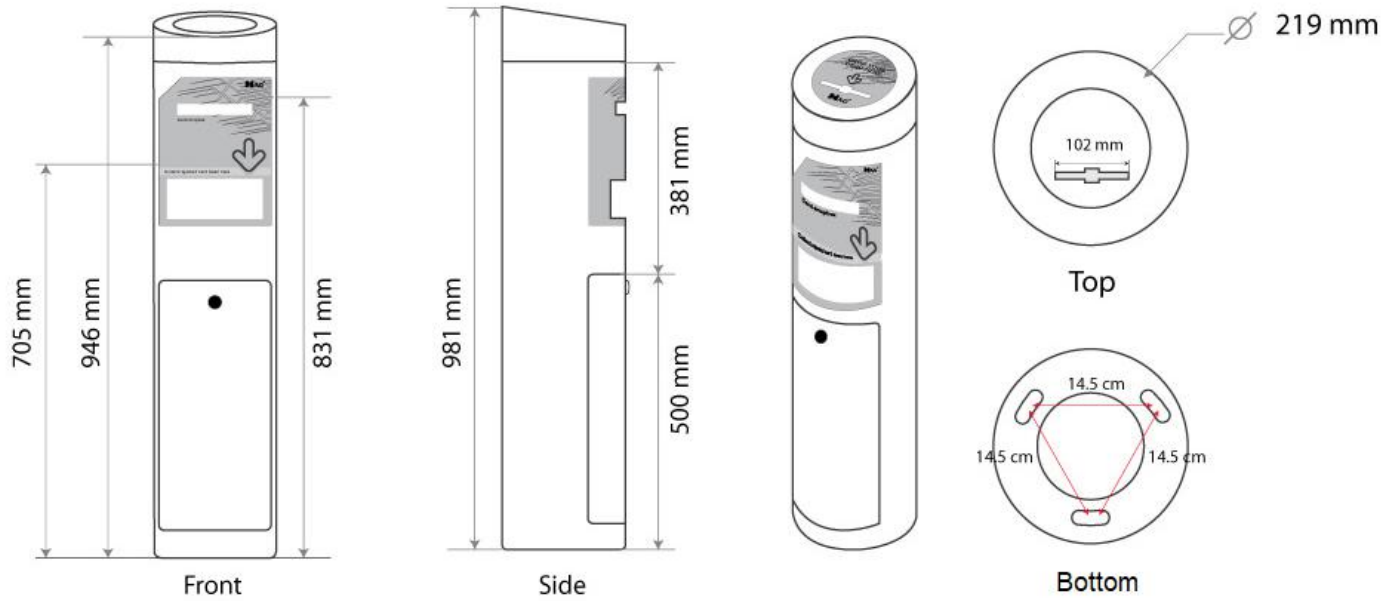
**Easy maintenance.** Top cover can be opened by key. Entire machine core can be taken out easily for servicing or installing reader. Bottom door can be opened by key to take out collection bin once it is full. Once collection bin is full, all cards (valid/invalid) card will fall out to the exit tray. DBX100 will not accept any more cards until the collection bin is cleared.



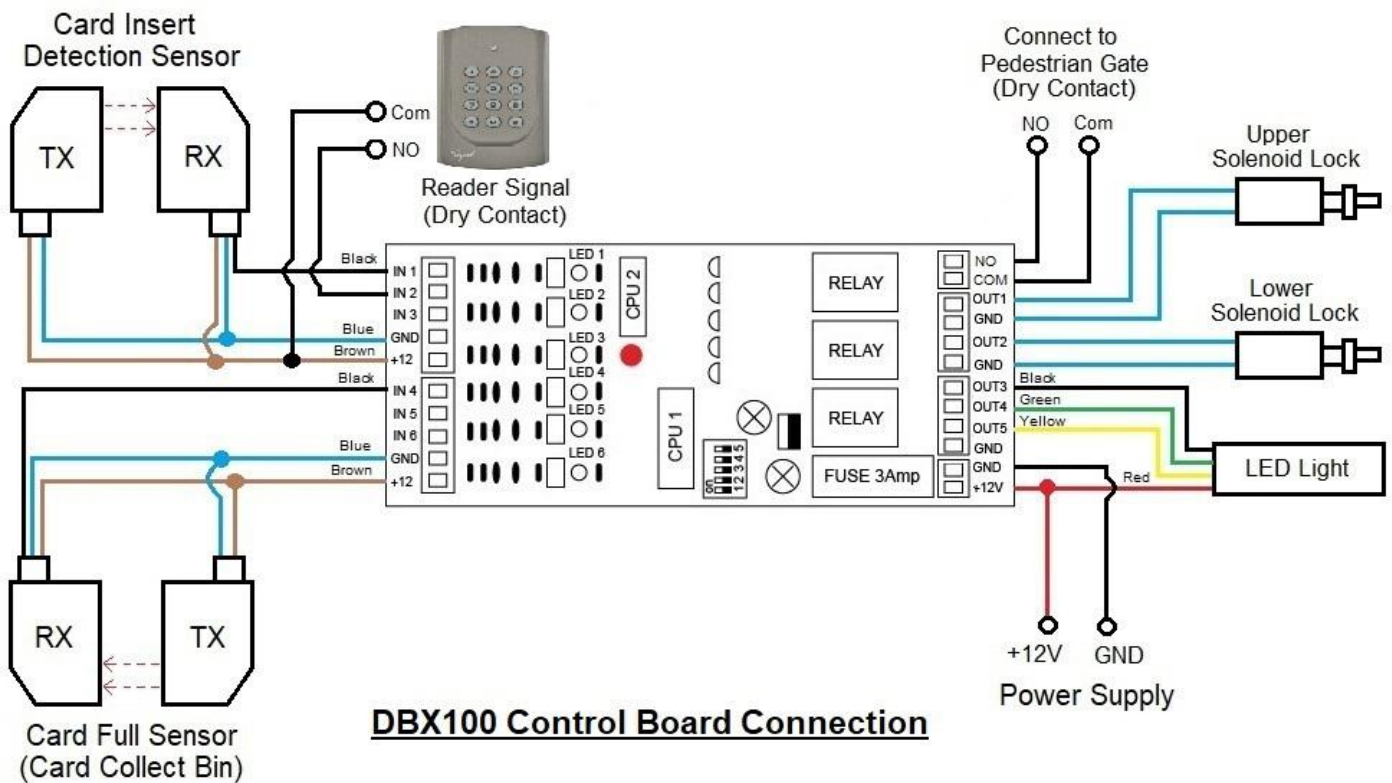
## Technical specification

Description	Parameter
Power Supply	AC230 power input Built in DC12V power supply inside DBX100
Power Consumption	Idle : 12VDC, 0.15A Operation : 12VDC, 3A
Light indicator	<i>Blue</i> : Power On <i>Green</i> : Valid card <i>Red</i> : Card collection bin is full
Collection bin dimension	13.5 x 13.5 x 29 cm Can contain up to maximum 280 cards
Maximum card size	10 (W) x 9 (H) cm

### Product Dimension

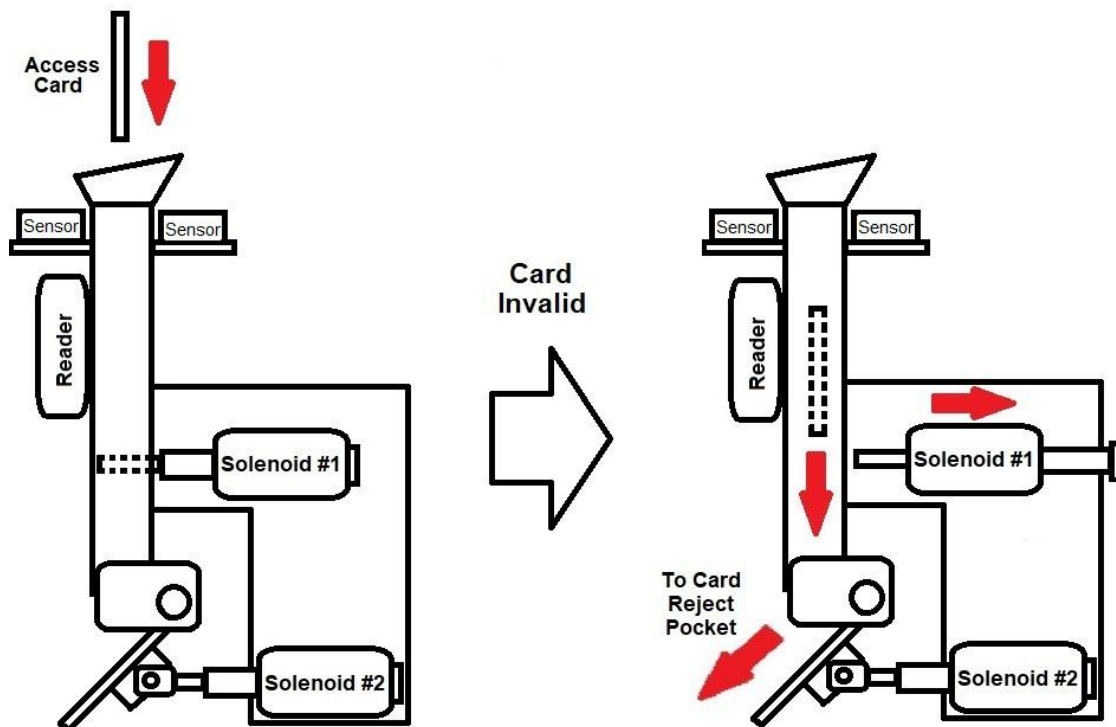


### Control panel diagram



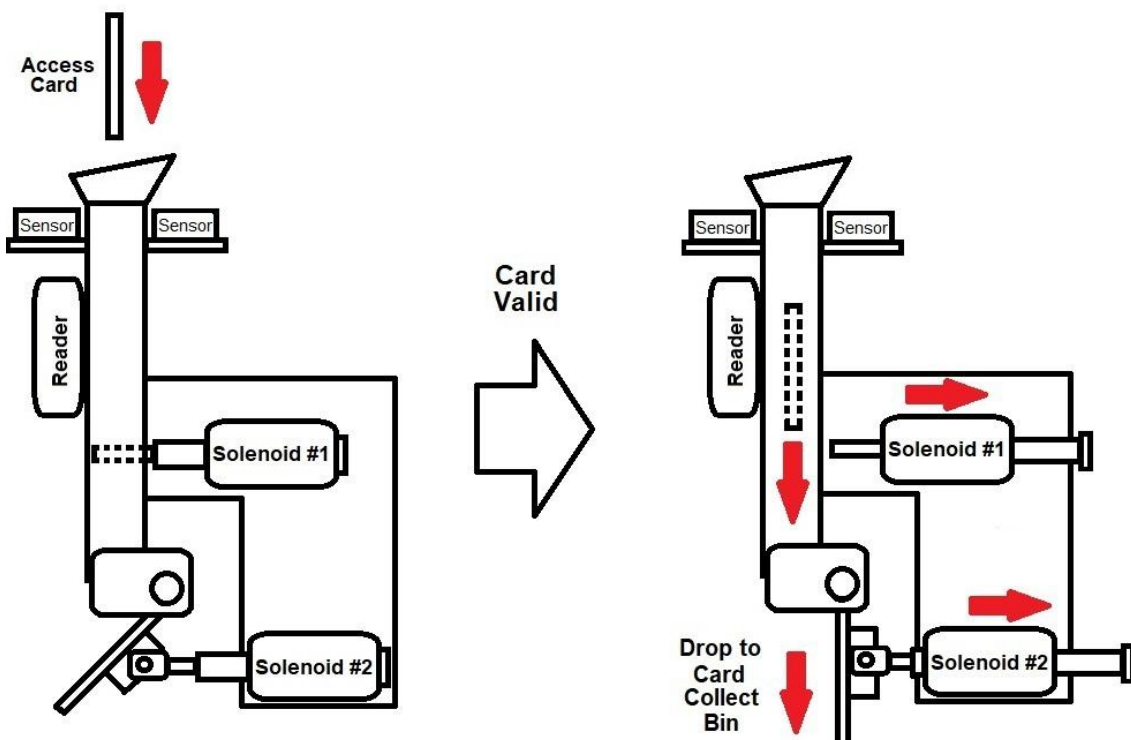
## Product Operation

### 1) Invalid card detected



- A) Card inserted.
- B) Sensor detected card
- C) Reader starts to read card.
- D) Invalid card detected.
- E) Solenoid #1 retracts and stays for 1 second. Solenoid #2 remained unmoved.
- F) Card drop to reject pocket.
- G) Solenoid #1 extends back to original position.

### 2) Valid card detected.

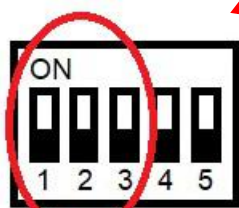
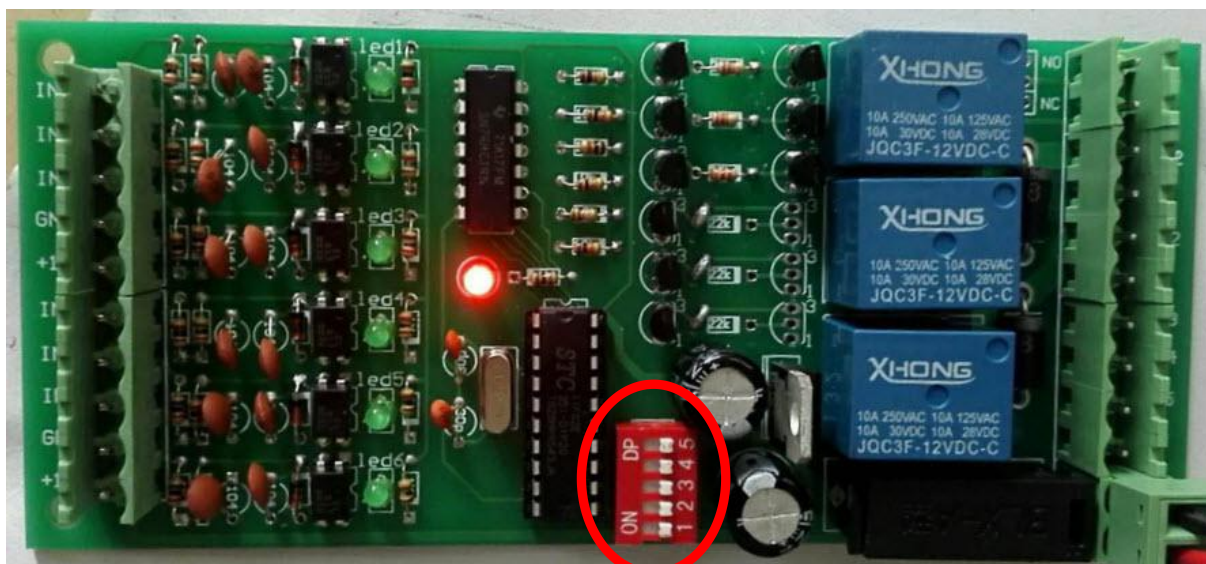


- A) Card inserted.
- B) Sensors detected card.
- C) Reader starts to read card.
- D) Valid card detected.
- E) Output signal send to Pedestrian Gate (open gate).
- F) Solenoid #2 retracts, after 0.5 seconds, Solenoid #1 retracts.
- G) Solenoid #1 and #2 stays for 1 second.
- H) Card drop vertically to card collector bin.
- I) Solenoid #1 extends back to its original position after 1 second.
- J) 0.5 seconds after Solenoid #1 extend back, Solenoid #2 extend back to its original position.

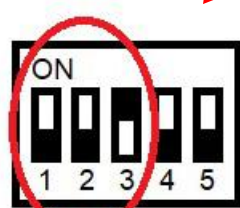
### DIP Switch Setting (Delay Time)

Delay time is the time for the Solenoid #1 to open after sensor has been triggered.

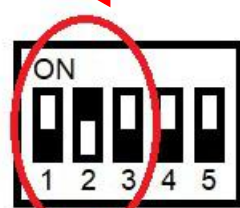
Only DIP Switch #1, #2 and #3 is applicable for the delay time setting.



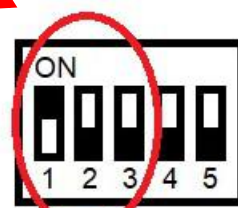
1 Off  
2 Off  
3 Off  
Delay Time = 2s



1 Off  
2 Off  
3 On  
Delay Time = 2.5s



1 Off  
2 On  
3 Off  
Delay Time = 3.8s



1 On  
2 Off  
3 Off  
Delay Time = 5s

By default, the delay time is preset at 2s.

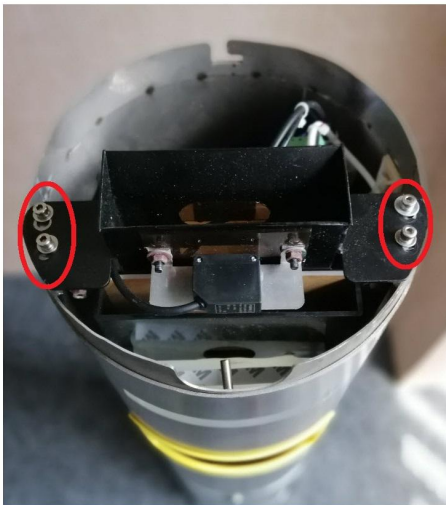
DIP Switch #4 and #5 has no function.



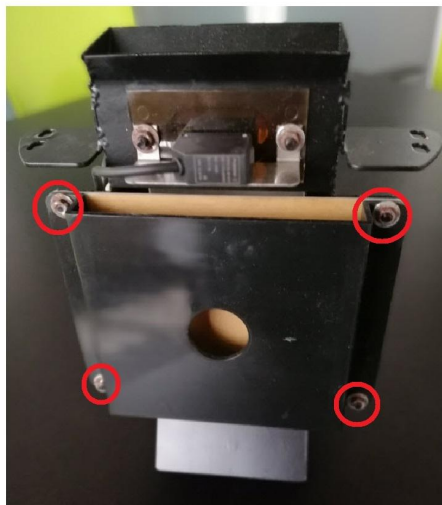
## Frequent Asked Questions

### 1) How to install reader to DBX100?

Answer: Take out the machine core, install reader into the reader bracket as shown below.



Remove screws and take out the machine core.



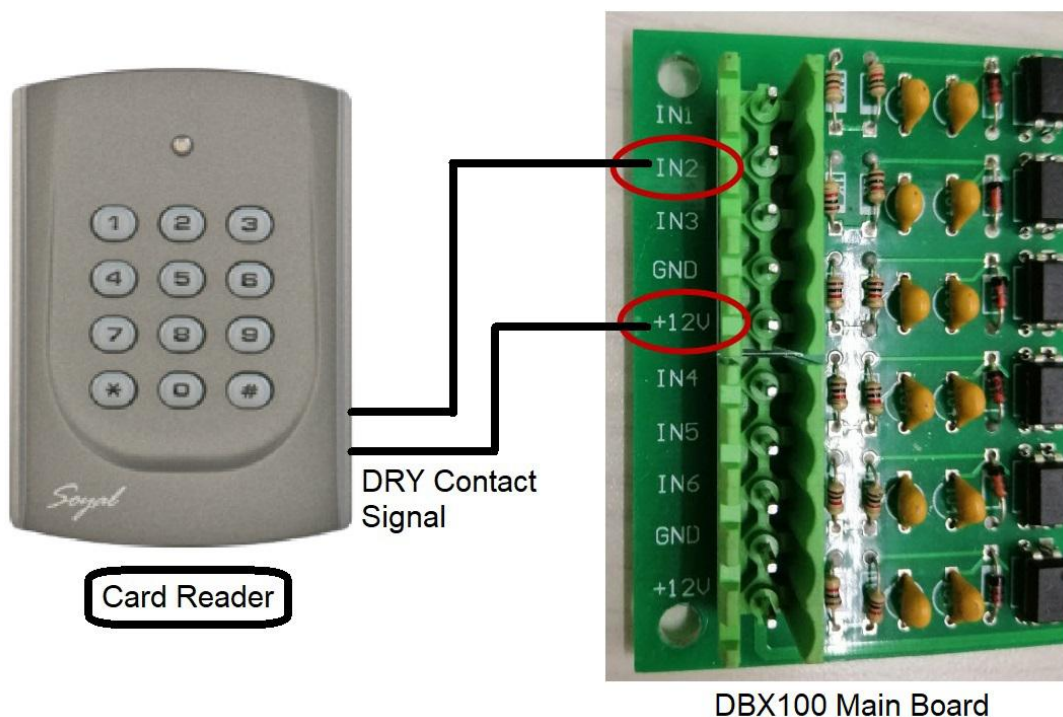
Remove screws, take out the bracket.



Put in the reader and install back the bracket.

### 2) How to connect reader signal to DBX100?

Answer: Connects the DRY Contact output signal from the reader to the port "IN2" and "+12V".

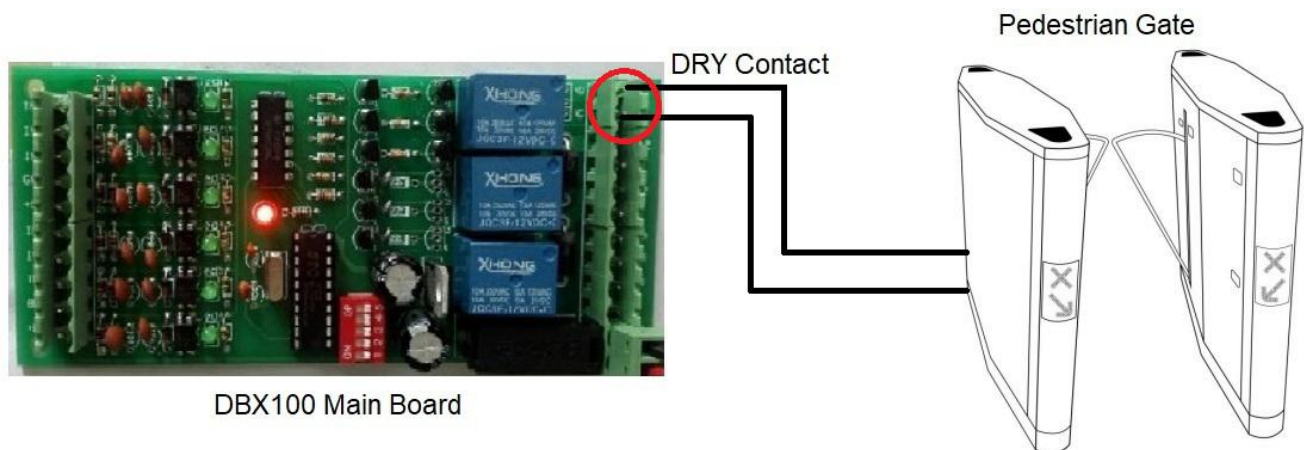


### 3) Does the reader in DBX100 needs to connect an additional output signal to open the gate?

Answer: No. Reader only needs to provide a DRY contact signal to the main board of DBX100, DBX100 itself will trigger the gate to open once it gets a DRY contact signal from the reader.

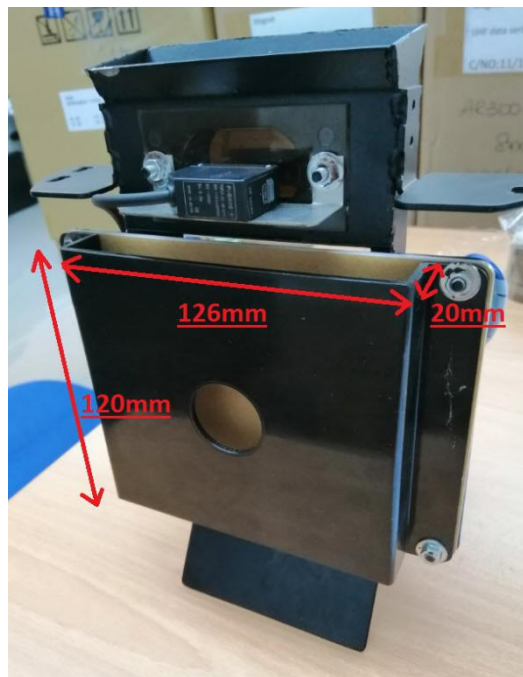
4) How to connect DBX100 to a pedestrian gate?

Answer: Connects DRY Contact Signal from DBX100 main board to Pedestrian Gate.



5) What is the dimension of the reader bracket?

Answer: 120mm (H) x 126mm (W) x 20mm (D)



6) Can the reader shares the DC 12V from DBX100 power supply?

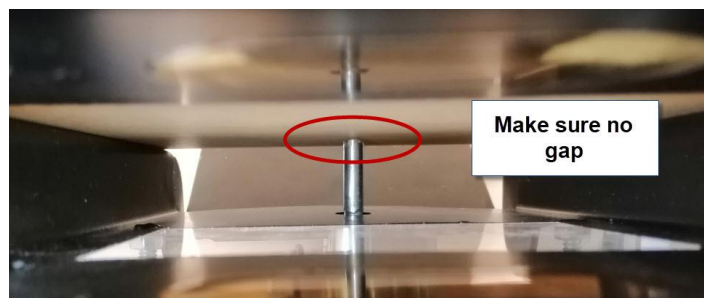
Answer: Yes.

7) What happened when the card collection bin is full?

Answer: The front LED will change to red colour. All cards received after the bin has full will drop to the reject pocket regardless of valid or invalid.

## Troubleshooting

- 1) Problem: Card cannot be read after drop into the machine core.  
Solution: a) Adjust the reader to a proper position to achieve better reading range.  
b) Check reader functionality.
- 2) Problem: Card was read, but Solenoid #1 does not open regardless of valid or invalid.  
Solution: a) Check the Card Insert Detection Sensor. (Solenoid #1 will only open after received signal from the sensor.)  
b) Check whether is there a dry contact signal generated from the reader to the Main board.
- 3) Problem: Valid card was read, Solenoid #1 and #2 opened, but the gate does not open.  
Solution: Check the dry contact signal from main board to the pedestrian gate.
- 4) Problem: Valid card was read, Solenoid #1 and gate opened, but Solenoid #2 does not open.  
Solution: a) Check the Solenoid Lock #2, make sure the movement is smooth.  
b) Check the output signal from main board to Solenoid Lock #2.
- 5) Problem: Card stuck at Solenoid #1.  
Solution: a) Check the Solenoid Lock #1, make sure the movement is smooth.  
b) Check and align the Solenoid pin position.



### IMPORTANT

\* Relay Time setting of the reader used in DBX100 MUST be set to 1 second.