



# **Intelligent Swing Gate Turnstile**

## **IPW-PM1000 Product Manual V3.2**

# Contents

Product Description..... 1

Structure Chart..... 2

Dimension Figure (Unit: mm) .....2

Product Parameters.....3

Product Function..... 3

Custom-made Feature..... 7

## Product Description

IPW-PM1000 is the world's first original outdoor industrial swing gate turnstile for pedestrian and cyclist, which has filled the gap in the industry. The housing made of stainless steel is durable; the swing gate is the elastic gate, that is applicable for all-weather and multiple conditions and can withstand frequent violent collision. The internal structure of the mechanism is also original, which can make swing gate be locked completely for anti-intrusion when the gate is at hindered zero position. The mechanism modules are imported from the international top brand DC brushless motors and precise positioning encoders, so as to make sure the swing gate can rotate quickly and accurately, stably and quietly, with low-power consumption, energy conservation and environment protection.

## Feature

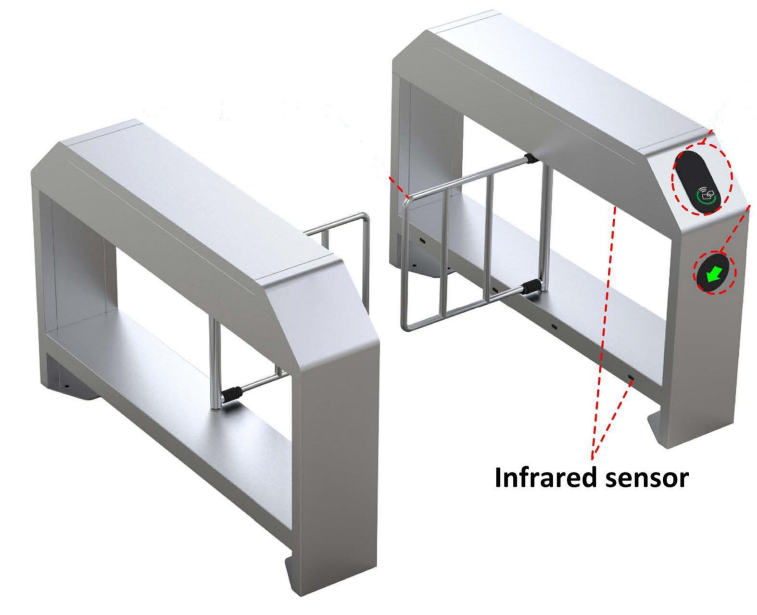
- ✧ Use DC brushless motor and encoder instead of servo motor to achieve precise position, to make sure that swing gate can move quickly & accurately and reduce mechanical fatigue of mechanism effectively.
- ✧ By using 10 pairs of military level high-performance infrared sensors and exact algorithms, it can accurately detect the pedestrian's passing position to achieve the purposes such as anti-tailgating, anti-reverse passing, anti-clamping and so on.
- ✧ Sunlight resistance design, preventing that sunlight cause interference to infrared sensors.
- ✧ The swing gate is the elastic gate, it can sustain frequent violent hitting by pedestrian or motorcycle on the gates.
- ✧ Original mechanism design, IPW-PM1000 can prevent mechanism from being damaged by strong hitting on swing gates.
- ✧ Adopt multiple anti-clamping design, such as anti-clamping by infrared sensor, mechanical anti-clamping and anti-collision by the most advanced electric current detection in turnstile industry, to maximally protect personal safety of passengers.
- ✧ The widen lane is optional for carrying luggage and wheelchair access.

## Occasion Applications

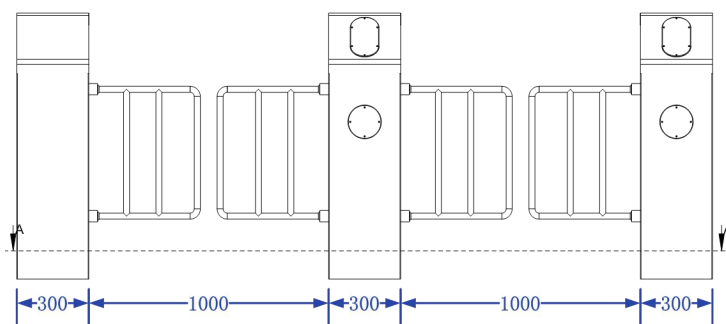
It is suitable for the mineral mining bases, factories, tourist attractions, residential community and other

**Outdoor Applications.**

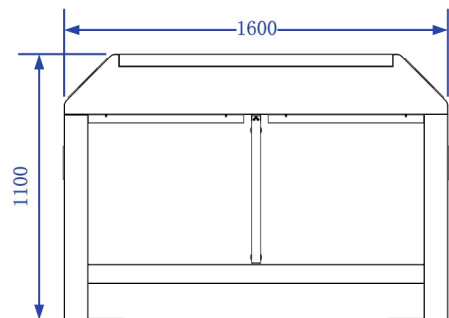
## Structure Chart



## Dimension Figure (Unit: mm)



**Front view**



**Side view**

## Product Parameters

Structure Parameters	
Housing material	304 grade stainless steel
Surface treatment	Brushed finish
Swing gate material	304 grade stainless steel
Technical Parameters	
Normal passing	30 ~ 45 people / min (according to the condition of pedestrians)
Evacuation passing	60 people/min (according to the condition of pedestrians)
Opening speed	0.3-0.6s
The turning angle	±90°
Operation temperature	– 20℃~60℃
Electric Parameters	
Power supply	100-240VAC, 50/60Hz
Rated power	100W
Input / Output signal	12 channels relay output signal/ 8-channel dry contact signal input
Communication interface	RS485 / RS232; TCP/IP interface (customizable)
Driving motor	DC brushless motor
Positioning Method	Use the encoder to position the swing gate accurately
Method of motor control	Using high-performance DSP chip

## Product Function

### ● Basic Function

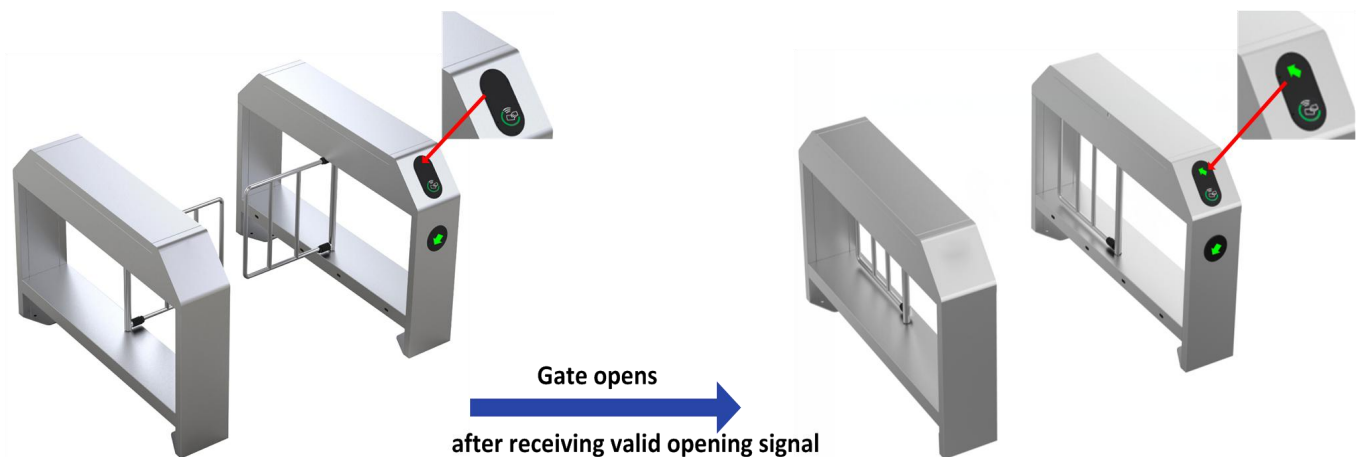
- **Passing mode switching function**: The entry and exit can be set independently **【controlled mode】** / **【 free mode 】** / **【 forbidden mode】**
- **Automatic reset function**: The turnstile will open the gate after receiving the valid opening signal when standby. The swing gate will return to the hindered zero position automatically under the following situation:
  - ( 1 ) Within the allowed time, pedestrians have been detected to pass through the passage in

### Specified Direction;

(2) Over the allowed time, there is no people has been detected to pass through the passage.

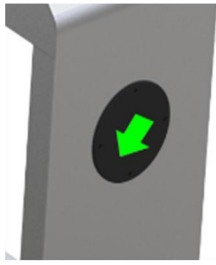
- **Self-recovery function:** The swing gates do not return to the hindered zero position because of human intervention. After revoking human intervention, the gate automatically returns to the hindered zero position.
- **Automatic adjustment function:** When the turnstiles need to readjust because of mechanical wear, the main control board can adjust automatically, accurately and conveniently.
- **Memory function of passing requests:** When more than 2 passing signals are given at the same time (including the same direction and opposite direction), the system will remember all the passing requests and finish them one by one. The number can be up to 255.
- **Passing indication function:**

(1) Direction indicator: The direction indicator is installed on the swiping-card panel of housing cabinet side to indicate the valid passing direction.



(2) Passing status indicator: It is installed on the column side of the housing cabinet, indicating whether the swing gates can open after receiving the valid signal.



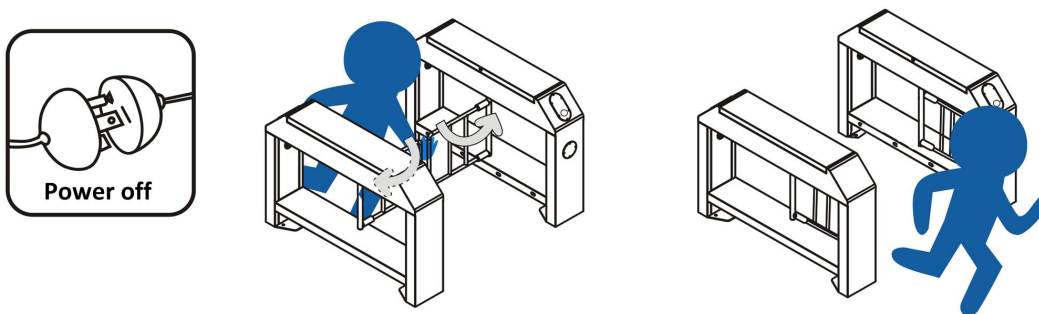


Turnstile standby; this direction is in the passing state

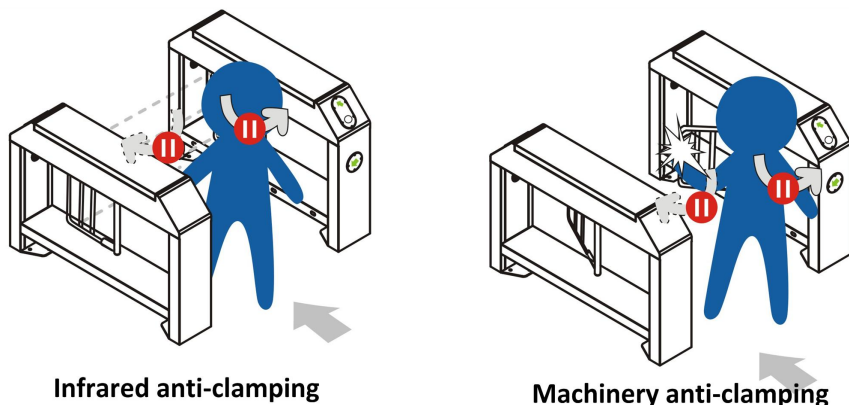


Prohibited passing; the opposite direction passing is not over yet

- **Compatibility:** Equipped with the dry contact signal input interface, RS485/RS232 interface, TCP/IP interface (optional), compatible with all kinds of access controllers.
- **Security Design**
  - **Self-check function when power on:** The system will self-check routinely and alarm when the power is on, and intelligently detect the key hardware and function. Find the hidden danger within the shortest time!
  - **Open gate when power off:** Adopt the leading mechanical structure by original creation; the system will open the gate automatically when power off or manually push the gate to be open so as to evacuate people conveniently, which meets the firefighting requirement.



- **Anti-clamping function:**

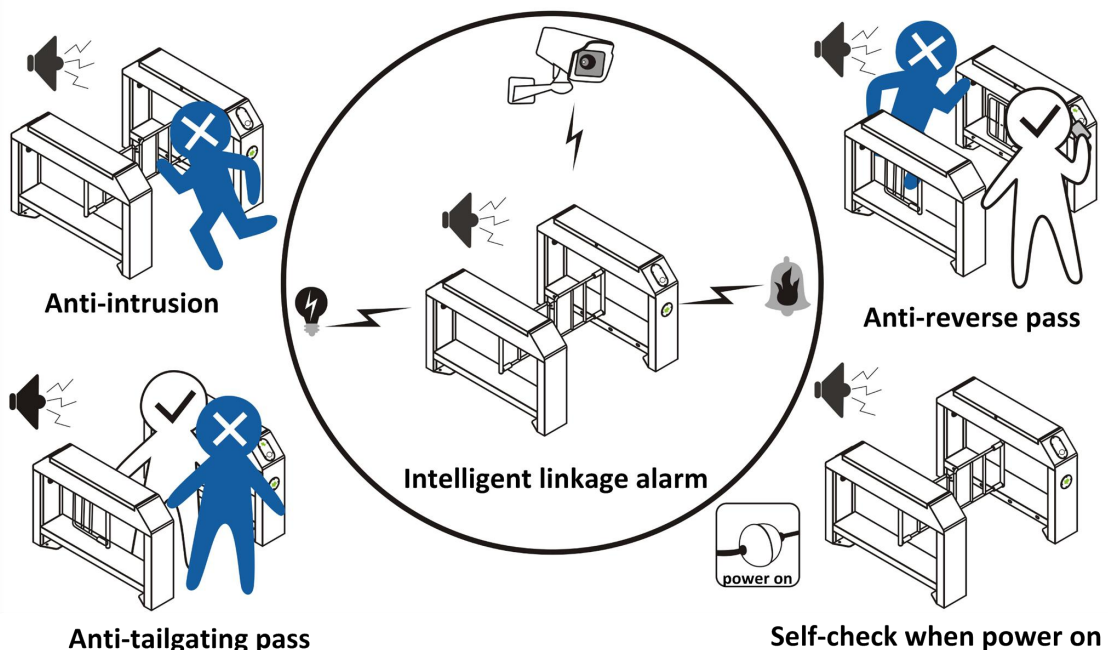


(1) Infrared anti-clamping: Install multiple pairs of infrared detectors near the swing gates' moving area(anti-clamping area).Once people or thing is detected within the anti-clamping area, the gate will automatically stop moving; until people or thing leaves the anti-clamping area, the gate will continue to move.

(2) Machinery anti-clamping: The swing gate will automatically stop moving when it encounters obstacles; the impulse force is within the safety range when the swing gate is moving.

(3) Anti-clamping by the electric current detection: if the swing gate encounters obstacles during its moving, turnstile system will detect whether the electric current is normal or not, so as to control motor to stop or reversely rotate, preventing clamping pedestrian.

- **Anti-collision function** : When the gate is locked, it can support the impulse force within the safety range. The gate can be manually pushed slowly when the impulse force is over the safety range, to protect the mechanism and pedestrian, and then recovers automatically.
- **Emergency escape function** : Equipped with emergency escape control device, the system can automatically open the gate to evacuate pedestrians conveniently.
- **Intelligent linkage alarm** : Illegal traffic events can be linked with other alarm monitoring equipment: such as access control systems, video management systems.





## Custom-made Feature

### ● Customized Functions

- Built-in or external counter
- TCP / IP communication

### ● Gate open button

- External door open button.
- Install the gate open button with wireless remote control.

### ● Thermostat system

- Under a low temperature environment, the thermostat system can be installed inside the device.

### ● Materials

- The material of housing can be 316 grade stainless steel, and the thickness of stainless steel can be customized.
- The material of swing gate can be tempered glass, Acrylic and polycarbonate etc. and the color can be customized.

### ● System Integration

- Integrate with access control system and built-in reader provided by customers.
- Integrate with visitor access control system.
- Integrate with ticketing system.

### ● Lane width

- The lane width can be custom-made for larger size, and the maximum can be 1200mm, but the length might need to be changed according to the lane width.