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# specification

KEY CABINET PRODUCT SPECIFICATION

Smart Access Gate: ZSW-D04

## 1. Product Image



## II. Product Overview

The ZSW-D04 intelligent passageway gate integrates sophisticated mechanical transmission, circuit board control, LED lighting effects, and various read/write technologies into a single unit. By configuring different reading devices, it enables intelligent control and management of passage flow.

The entire product rack is manufactured using stainless steel laser cutting and CNC bending molding, featuring an elegant design. It employs a servo control system that offers simple operation and a wide speed range; the servo motor delivers high speed and stable torque characteristics, and is equipped with a built-in encoder, enabling a highly precise and high-performance control system. The system features standard quick-connect electronic interfaces and integrates components such as QR code scanners and card readers, allowing seamless integration of barcode, QR code, ID card, and IC card reading/writing devices. This facilitates orderly and civilized access for personnel while preventing unauthorized entry. Additionally, to comply with fire escape requirements, the system includes dedicated fire emergency button interfaces that automatically open the gates in emergencies to facilitate evacuation.

## 2、Product Features

网址: [www.zebrastation.cn](http://www.zebrastation.cn) 电话: 020-3999 6976 邮箱: [guoyuhao@ibanma.net](mailto:guoyuhao@ibanma.net) Website:  
[www.zebrastation.cn](http://www.zebrastation.cn) Phone: 020-3999 6976 Email: [guoyuhao@ibanma.net](mailto:guoyuhao@ibanma.net)  
Address: Room 1401, Building 16, Tianan Headquarters Center, No.555 North Panyu Avenue,  
Donghuan Street, Panyu District, Guangzhou City

- The system features a collision prevention mechanism: when an external object strikes the gate without authorization and its movement angle reaches the preset value (e.g.,  $2^{\circ}$ ), the controller activates the braking system to halt the gate's movement and triggers an audio-visual alarm. If the external force increases further, the brake controller prevents the gate from being damaged; upon removal of the force, the gate automatically resets and the system returns to normal operation.

- Features a fault alarm notification function;

- The two actuators communicate via RS485 protocol, enabling real-time data exchange between them. This high-performance, highly reliable fieldbus system supports distributed or real-time control, ensuring effective communication between actuators and maintaining synchronized operation and unified status of the access gates.

- The brushless motor employs a fully closed-loop control system with high-stability rack and pinion components, combined with an advanced proportional-integral-differential (PID) algorithm, ensuring precise position accuracy, rapid response, smooth operation, and absence of jitter or delay during gate operation; the motor operates without harsh noise, experiences no operational obstructions, delivers optimal torque, and offers long service life.

- Multi-layer anti-trap protection: When the gate swing door is obstructed and the actual operating current exceeds the anti-trap protection threshold, the physical anti-trap protection function is activated. Combined with infrared anti-trap protection, this multi-layered safeguard significantly reduces the risk of accidental injury.
- Features an automatic reset function: if a pedestrian fails to pass through within the system-defined time after successfully scanning a valid card, the system will automatically revoke their passage permission for that attempt.
- Standardized external electrical interfaces compatible with various card readers, enabling remote control and management via a management computer;
- The entire system operates smoothly with minimal noise;

### 3、Specification Parameters

| Main Specification Parameters           |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| product model                           | ZSW-D04                                               |
| outline dimension                       | Length * Width * Height: 900 mm * 160 mm * 980 mm     |
| Box Material                            | Top cover: 1.2 mm; Body: 1.0 mm SUS 304               |
| Door panel material                     | 8 mm transparent acrylic                              |
| Material of the intermediate gate plate | 8mm tempered glass                                    |
| production engineering                  | Fully computer-controlled CNC laser cutting and fully |

|                               |                                                                   |
|-------------------------------|-------------------------------------------------------------------|
|                               | computer-controlled CNC bending.                                  |
| gangway width                 | ≤900mm                                                            |
| ambient temperature           | -20°C to 70°C                                                     |
| work environment              | Indoor and outdoor (with an additional canopy installed outdoors) |
| input voltage                 | 100V~240V                                                         |
| Driving Motor                 | 24V brushless motor                                               |
| plant capacity                | 120W                                                              |
| response time                 | 0.2S                                                              |
| Through Traffic Speed         | Open: 50 people/min; Closed: 35 people/min                        |
| communication interface       | RS485                                                             |
| communication distance        | Less than 1200 m                                                  |
| Door Opening Signal<br>Input  | Dry Contact                                                       |
| Door Opening/ closing<br>Time | Less than 1 second                                                |