

Sparking

Digital Frequency Conversion Servo Motor Parking Barrier

Model:SP Series



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01 Introduction ❖

SP series parking barrier is a new generation of digital high-speed barrier gate. It adopts a rare earth **brushless torque gear motor and a three-closed-loop PWM frequency conversion servo controller**. The full digital control does not require limit switches and is maintenance-free.

The gate is not only energy-saving, durable, but also fast and stable. It is safe, flexible and accurate in control, and the **boom arm direction can be adjusted left and right on site**, and the type of boom arm can be replaced on site.

It is the first choice for supporting parking management systems and expressway toll systems.

The SP parking barrier can be equipped with an aluminum alloy octagonal boom arm with anti-smashing rubber strips up to **6 meters long**, and the lifting speed is steplessly adjustable in 0.9-6 seconds. SP parking barrier also supports mobile **APP control** and **Ethernet control**.

02 Configuration ❖

SP series parking barrier consists of 5 parts: **housing, drive motor, transmission mechanism, controller and boom arm**.

The housing is made of **2.0 mm** cold-rolled plate, and the style and color can be customized in batches;

The motor is a **NdFeB rare earth permanent magnet brushless torque motor** with low power consumption and high torque;

The **transmission mechanism** is divided into 50:1 high speed type and 100:1 standard speed type. All models are maintenance-free and efficient helical gear transmission four-bar linkage;

The controller is a **full-closed-loop frequency conversion servo controller**, which can be expanded with an Ethernet control module;

The boom arm can be equipped with **round type, octagonal type, articulated type and fence type**.

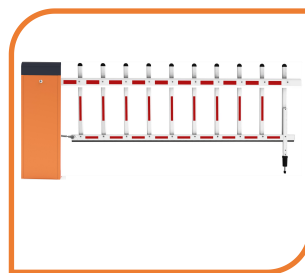
The parking barrier is mainly installed at entrance and exit to control the access of vehicles. The barrier gate can be used standalone or connected to parking system.



Swing-away kit



Articulated arm



Fence arm



Color Options

03 Advantages

Stepless speed regulation



Frequency conversion servo controller. The open and close speed can be set separately from **0.9~6 sec.**

Maintenance-free DC brushless servo motor



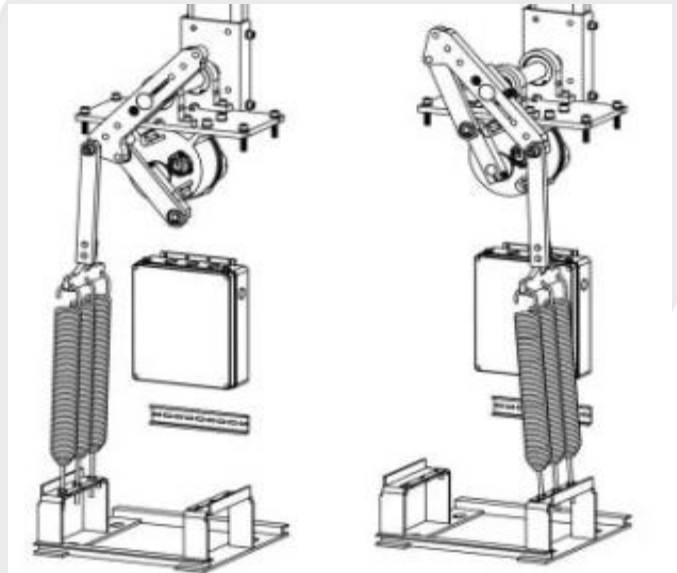
The maintenance-free DC brushless servo motor ensures a service life of **10 million times**, and the 100% efficiency ratio allows the barrier gate to operate continuously 24 hours a day. The maximum **50W low power** consumption is environmentally friendly but powerful.

Low power consumption application of backup power



In case of power failure, the 4.5AH battery can last for **3000 times** of movements, which can be conveniently applied to mobile traffic control vehicles and manual emergency toll collection.

Change arm direction freely on site



Left-hand

Right-hand

In the past, you needed to stock up on barrier gates with different direction. Now you can easily change the arm direction on site (without replacing any parts), thereby reducing your inventory and capital occupation.

Automatic detection of running status and automatic error reporting



The controller detect the running status, and report the misalignment code through the LED digital tube, which will help you quickly find and solve the problem.

Error code:

E1---Pulse angle meter or motor fault code.

E3--- Raise the input abnormal code, if the input continues to be short-circuited for more than 10 seconds, it is considered abnormal.

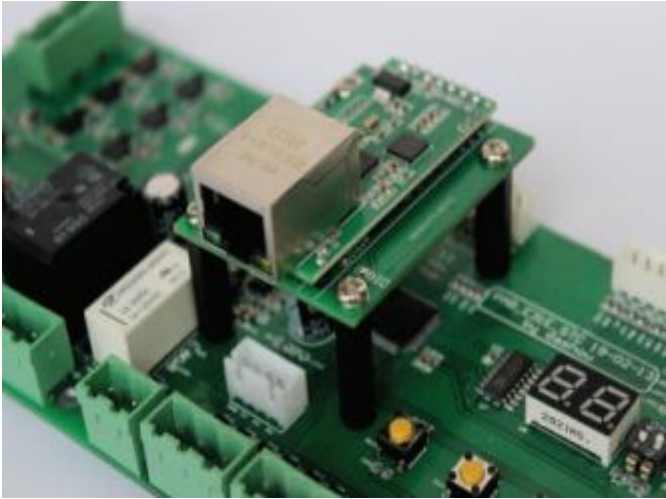
E4---Decrease the input abnormal code, if the input continues to be short-circuited for more than 10 seconds, it is considered abnormal.

E5--- 1# ground sense input abnormal code, if the input continues to short circuit for more than 10 seconds, it is considered abnormal.

E6---Infrared input abnormal code, if the input continues to be short-circuited for more than 10 seconds, it is considered abnormal.

E7---Software unblocked mode code.

TCP/IP module makes barrier gate networking more convenient (Optional)



The barrier gate is equipped with RS485 interface as standard, and TCP/IP RJ45 interface is optional. This interface can help you easily integrate the barrier gate with your system, so as to realize the control of the barrier gate from your system (note: to realize this function, "Ethernet module" must be installed on the barrier gate controller, and its communication protocol is provided by the factory)

Auto rebound when there is a resistance



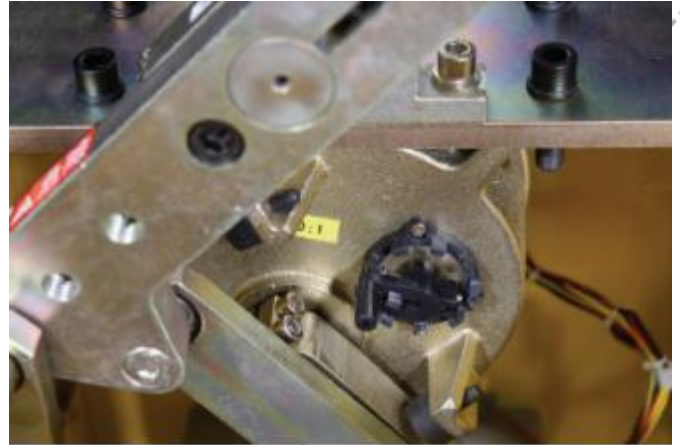
Anti-smashing octagonal arm with rubber strip



Anti-smashing foam round arm

When the arm is blocked by an external force during the closing, it immediately rises to a vertical state to protect the safety of vehicles or pedestrians. The sensitivity of the auto rebound is adjustable.

Manual control barrier when power failure



Close status of manual control



Open status of manual control

In the state of power failure, turn the handle of the manual/lock lever by hand to control the barrier gate.

Note: It is forbidden to use this function when the barrier is powered on, it may hurt you and the equipment.

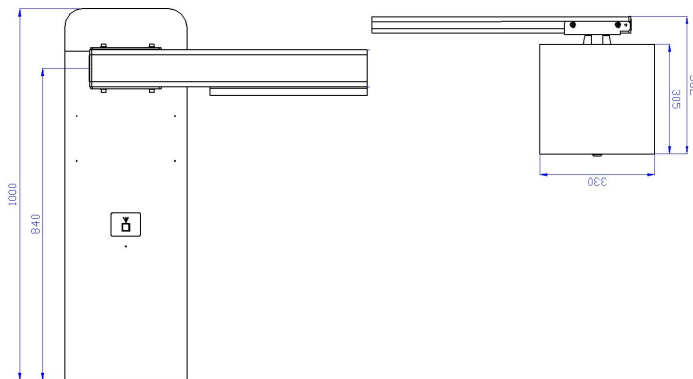
Driver-friendly swing away kit



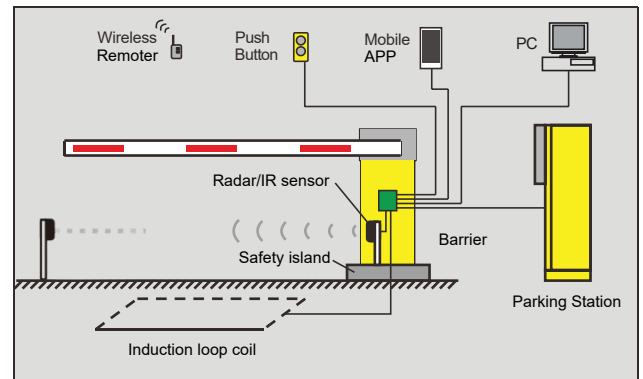
After the anti-collision device is installed, when the boom arm is hit by a vehicle, the boom arm will pop out to protect the boom arm from being damaged by the vehicle. You can easily add an anti-collision module on the barrier gate to realize this function.

04

System Diagram



(Dimension)



Application wiring diagram

Technical Parameters

Speed	0.9~6sec adjustable	Communication interface	RS485(TCP/IP optional)
Aluminum alloy octagonal arm	Max 6 meters	Ground coil	Pulse width>100ms
Aluminum alloy foam round arm	Max 3.5 meters	Casing material	2mm cold rolled sheet
Arm direction	Interchangeable	Protection level	IP54
Power supply	AC220V±10%, 50/60Hz, Max.0.5A	Gross/Net weight	46/44KG
Motor	50W DC 24V Brushless Servo Motor	Package size	1100X480X430mm
MTBF	10 million times	Product dimension	950X320X329mm(H*W*D)
Controller	PWM frequency conversion servo control	Working temperature	-30°C~55°C
Remoter	2 pcc, distance ≤ 20 meters	Working humidity	10%~95%

Optional accessory



PWM Frequency conversion servo controller



WIFI control module



Aluminum alloy foam round boom



LED light boom



Boom support



Remote set



Loop coil



Vehicle detector



Warning light



Infrared sensor

05

Honorary qualification



CE



ISO9001:2015 report



Testing report



Testing report



Utility model patent



Growing enterprise



National high-tech enterprise



Technology leading company



Premium brand

06

Typical Case



Harbor area



Express way ETC lane



Expressway toll channel



Airport car park



Uruguay toll gate lane



India toll gate lane