

User Mannual For Parking barrier



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Precautions

Please read this manual carefully before installation, which concerns very important information like safety, installation, operation and maintenance. Any operations not mentioned in the manual are forbidden. Wrong operation may cause damage to the product, even hurt people or other properties.

Please keep this manual for future reference.

Considering possible danger during installation and operation please strictly follow current standard and regulations during installation, especially:

- Check whether you need other equipments or materials to satisfy specific demands before installation;
- Except for the instructions mentioned in the manual please **DONOT** modify any component. Modification without instruction in the manual may cause equipment failure, and we will not take any responsibilities for the damage caused by it.
- Please **DONOT** put the equipment into water or other liquid. Please make sure that there is no liquid filtering into barrier controller or other opened devices.
- Keep the equipment away from the heat and fire, otherwise the component would be damaged, even cause fire disaster or other dangerous situation.
- Please power off the equipment when it is **NOT** in use for long time.
- It is necessary to connect the power supply of equipment with ground.
- Please power off the equipment before any operation of opening the equipment case.
- Please power on or change the fuse after checking and eliminating the failure when the power trip off or the fuse is burnt.
- For the boom with anti-collision device you should set a 50cm-tall fender pile at 1m in front of the barrier (boom fall down direction), which keeps the boom horizontal movement within 90° controlling range; further more **DONOT** stand or put anything within the 90° range to avoid being hurt when there is a collision.

Please do follow the precautions here and warnings in the following chapters.

Please contact our customer service department if you meet any irresolvable failure by this manual.

1. Feature description

Reasonable design: the product uses connecting-rod reduction box, which possesses the characteristics like simple construction, running smoothly, manual operation and automatically open when power off, easy installation and operation, safe and reliable, attractive appearance, etc.. It is ideal barrier for roads and parking lots. The main functions and characteristics as below:

- Simple design: utilizing crank connecting-rod to reduce mechanical failure with the characteristics of low noise, no pollution and maintenance free.
- Magnetic-sensing limit switch: controlled by low voltage DC, safe and reliable, more accurate.
- Barriers with long boom have special manual operation and automatic opening device when power off.
- Special balance mechanism to ensure the opening vertically and closing horizontally, smoothly, and eliminating the phenomenon of pausing during opening/closing and too fast by non-constant velocity running.
- Barrier cases are powder coated by high class paint with uvioresistant function, and the color will not fade in sunshine.

- The barrier boom is made of high strength aluminum alloy tube covered with light-reflecting material to warn the driver. Warning flowing tube can be applied on the boom and also apply foam or anti-bumping mechanism to avoid knocking and bumping down on the vehicles. The boom is normally fixed with the barrier, but anti-collision type (the boom will eject out of the boom bracket after being collided) is available.
- The motor has thermal protection function. It will power off automatically when the motor temperature is over 135°C, so the motor will not be burnt easily.
- The life cycle is over 3.5 million times.

Main functions

- “UP”, “DOWN”, “STOP” operations can be realized by manual button
- “UP”, “DOWN”, “STOP” operations can be realized by wireless remote control from far distance
- Able to raise the boom manually when power off
- Anti-bumping mechanism like infrared, pressure wave switch or vehicle detector can be installed to enforce anti-bumping function.
- Other functions can be added to order.

Main parameters:

- Voltage power supply: AC220V±10%
- Frequency of power supply: 50/60Hz
- Rated power of the motor: 60W
- Standard boom length: 3-6m
- Rated torque : 35N.m
- Boom open/close time: 3--6S
- Noise: ≤60 dB
- Rated speed: 1500r/min
- Life cycle: 5 million times
- False operation of the boom: ≧0.01%

2. Product construction

The barrier consists of machine core, housing, balance mechanism, boom bracket and boom. The host machine core is composed of redactor mechanism and crank connecting-rod.

3. Model and specification

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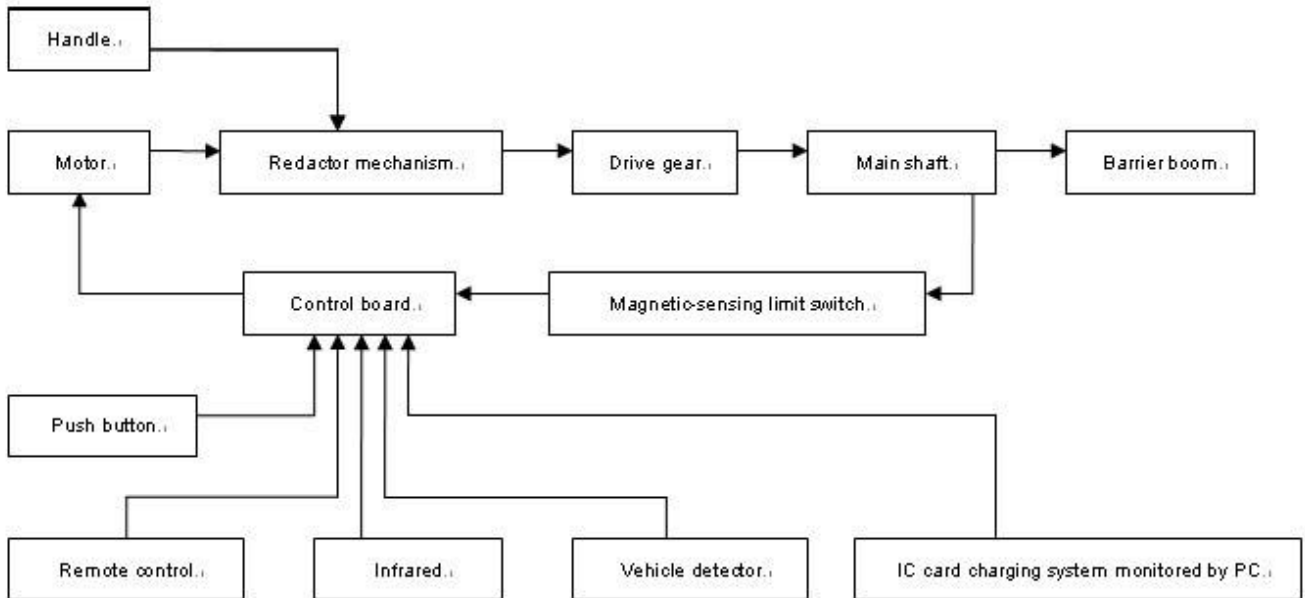
Enterprise code Machine core type Model name

The commonly used barriers boom is rectangle tube, octagon tube and special shape. Please refer the real product for the dimensions.

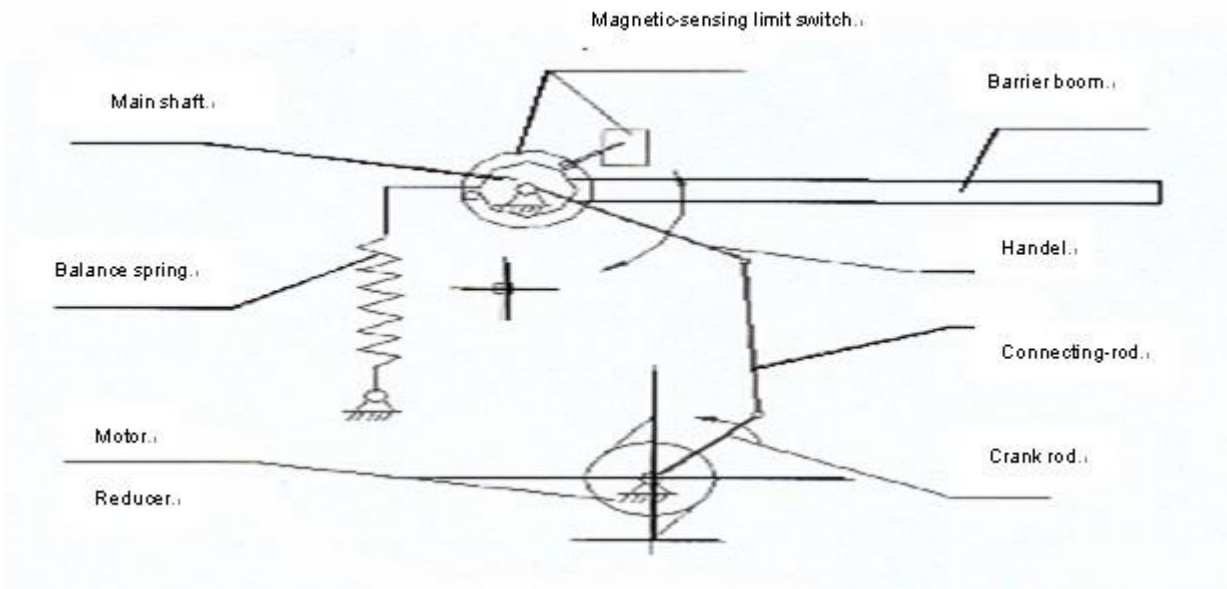
Standard housing dimensions: L350*W300*H1020. There is a little dimension difference for different models. Please refer the real product for the dimensions.

4. Working principle

The motors of the barriers realize speedy raising and falling of the boom by reduction mechanism and drive gear; to realize horizontal and vertical limitation by magnetic-sensing limit switch.



Barrier operating principle block diagram



Working principle sketch map

5. Installation and adjustment

5.1 Installation

Before installation slots have to be dug ready for putting wire tube and power supply wires; then fix the host machine and install the barrier boom; install boom bracket under the end of the boom and close the boom. Barrier installation consists of two parts: installation for barrier body, boom bracket and installation for barrier boom. (Note: it is not necessary to install boom bracket certain some situation.)

5.3.1 Installation for barrier and boom: draw the sketch map on the ground according to the barrier base

dimensions; put the barrier on it and draw screw hole on the ground; move barrier away and drill holes; put the barrier on the hole and insert expansion screw bolt to fix the barrier on the ground. Note: the depth and aperture of the holes must match with the screw bolt; the base of the housing should keep in the same level as the boom bracket base, which can be adjusted after installing the boom.

5.3.1 Boom installation: insert the boom into boom bracket and screw up to fix it.

5.3.1 Users can put the control box inside the guard room or other working office according to the site situation, and connect the cable output end with the control box.

5.2 Balance adjustment

The adjustment aim is to make the barrier boom to vertical status for opening and to horizontal status for closing, at the same time to minimize the vibration caused by boom movement inertial at the travel limitation. The adjustment consists of balance mechanism adjustment and control system adjustment. Both should be carried out for optimum. The barriers have been adjusted ready before delivery. For example: if the boom vibrate when fall down, then you need to tighten up the spring (Note: all springs inside the barrier must be tightened or loosened simultaneously); if the boom vibrate when raise up, then you need to loosen the springs.

You can loosen the springs or reduce spring quantity when it is necessary to shorten the boom length; and you can tighten the springs or add spring quantity when it is necessary to increase boom length or weight.

5.3 Overall test

5.3.1 Press UP on the push button and the red signal LED on barrier controller will light, barrier boom will rise up. When the boom reach 180° to barrier housing, red HORLED on limit switch board will light, which means barrier has reach its limitation position and the motor will stop working.

5.3.2 Press STOP on the push button and no signal LED on barrier controller light. At this time the barrier boom will stop moving no matter where it is and the motor will stop working.

5.3.3 Press DOWN on the push button and the red/green signal LED on barrier controller will light, barrier boom will fall down. When the boom reach 90° to barrier housing, red VERLED on limit switch board will light, which means barrier has reach its limitation position and the motor will stop working.

5.3.4 Under the situation that the barrier boom is falling down but the vehicle detector get signal input, the barrier will change to open status immediately to protect the vehicle from been knocked.

5.3.5 Running constantly to observe whether there is any changing on horizontal/vertical angle of the boom and whether the UP/DOWN of the boom is smooth.

5.3.6 Running constantly to observe whether motor is over heat and whether there is abnormal sound and awful smell.

Note: anti-bumping function of the vehicle detector is invalid when the barrier boom reaches its limitation position.

6. Attentions for using and maintenance

- Please check whether the voltage of power supply is coincide with the barrier, that is 220V±10%.
- Please keep control box away from moisture to assure its features, stability and life cycle.
- Press UP button to open the barrier boom. The boom will rise automatically and stop moving when it reaches its limitation position.
- Press DOWN button to close the barrier boom. The boom will fall down automatically and stop moving when it reaches its limitation position.
- Press STOP to stop the movement of the barrier boom.

- Deceleration oil has to be changed every one year; reliability of conducting wire and plug-in board must be checked periodically.
- Pay attention to vehicles and passengers during operation to avoid any accidents.
- Remote control distance can reach 50m, which takes you much convenience.

Installation and adjustment:

Please note: all barriers must be installed by qualified technicians under related laws and regulations. Please read this manual carefully before installation.

7. Customer service

We provide lifetime service guarantee and one-year free guarantee for all of products except for failures caused by:

1. Force majeure or natural climates;
3. Incorrect operation or other human factors;
3. Incorrect power supply.

We provide reparation service for all our products with cost based charge after one-year free guarantee period.

8. Packing list

Description	Quantity	Remark
Barrier	1 set	
Boom bracket	1 pc	
Barrier boom	1 pc	≤3m
Remote control	1 set	Including emitter and receiver
Certificate	1 pc	
Manual button	1 set	
User's manual	1 set	

9. Appendix

