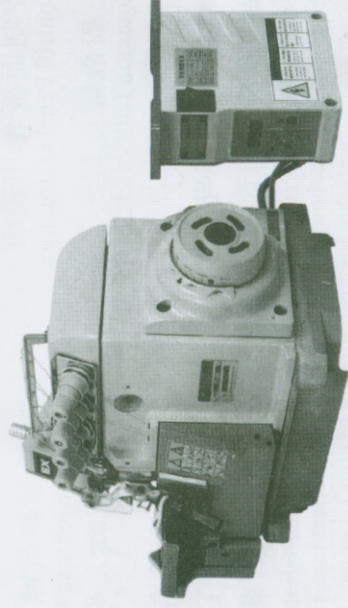


# 节能伺服电机

## Energy-Efficient Motors

# 使用手册

## User Manual



为了安全的使用，请您在使用之前一定阅读本使用说明书。  
Please read the manual carefully before using this unit.

另外，请您注意保管本使用说明书，以便随时查阅。  
Please keep this manual handy for ready reference.



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## 一、安全说明:

### General Safety Instructions

#### 1. 电机接通电源时请不要把脚踏放在脚踏板上

Do not place your foot onto the pedal when connecting to the power source

#### 2. 本产品需专业人员安装, 调试

Installation and trial-run must be done by skilled person

#### 3. 严禁在通电时打开控制箱与电机端盖

Open control box or motor cover under electrical power is not permitted

#### 4. 必须保证系统接地可靠

Make sure the earthing system is working well

#### 5. 以下操作请务必断电

When doing the following the machine has to be disconnected from the power supply

##### A. 换针, 穿线或更换底线时

When threading machine, replacing needle, bottom thread

##### B. 安装, 拆卸或修理时

When install, dismantle and repair

##### C. 翻抬缝纫机时

When turn over the sewing machine

## 二、产品介绍: Product Instruction

本产品由本公司自主研发, 产品个性鲜明, 真正体现了机电一体化的概念, 更是节能, 高效, 环保, 优美集结于一身。可广泛应用于多种缝纫设备。

We design and manufacture the servomotor for the purpose of Mechanotronics. This motor features in energy-saving, high production efficiency, environmental and compact. Could be used for different industrial sewing machines.

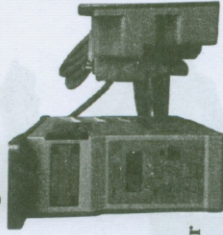
### 1. 组成部分: Construction

控制系统由控制器和电机两部分:

The servomotor is composed of control system and motor

#### A. 控制器: 控制箱和脚踏调速器。

A. Control system includes control box and pedal speeder





(2) "S" 键 (2) "S" key

此键也有两大用法：  
第一个用处是直接按 "S" 键转换到 "S" 键上的小灯亮为打开机头灯，灭为关掉机头灯。

第二个用处是功能参数 (确认) 键下面第2点有介绍。

This button also has two uses: The first use is to simply press "S" key to off or lamp on the head.

The second use is to function parameters (confirm) key, point 2 are described below.

(3) "+" "—" 键 (3) "+ "-" key

此两个键是调速调整用。These two keys are used to adjust speed.

2. 进入参数的操作方法:

例: 怎样把电机的顺时针转到逆时针转:

第一步: 先打开电源;

第二步: 先按 "P" 键不放, 再用另一只手按 "+" 号键, 此时画面会显示 P-00

第三步: 此时按 "+" 号键, 画面会显示 P-01, 再按 "+" 号键画面会显示 P-02, (P-02) 就是电机正反转参数 (常用参数表上有)。

第四步: 此时按 "P" 键画面会显示 "1"

第五步: 此时按 "-" 号键把 "1" 调到 "0"

( "1" 为顺时针转, "0" 为逆时针转, 常用参数表上有)。

第六步: 按 "S" 键确定参数调整完毕并退出参数。

(2) To enter the parameter method of operation:

Example: How to change the motor from clockwise to Counterclockwise  
The first step: Open the power;

Step two: Press the "P" key, no leave, and use the other hand press the "+" key, the screen will display the P-00

The third step: press "+" key, the screen will display P-01, and then press the "+" key again, the screen will display P-02, (P-02) is a motor clockwise or Counterclockwise parameters (common parameter list has).

Step Four: Now press "P" key (enter into parameter) screen will display "1"

Fifth step: press "-" key, change "1" to "0"  
( "1" clockwise "0" for the counter-clockwise, common parameters list has ).

3. 恢复出厂设置:

恢复出厂设置方法: 先按 "P" 键不放, 再用另一只手按 "+" 号键, 此时画面会显示 P-00, 再长按 "S" 键约3秒即可, (恢复出厂设置值在常用参数表里)。

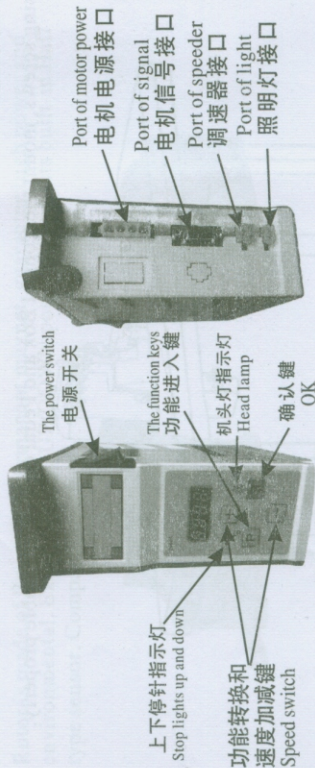
3. Restore factory settings:

Restore factory settings: Press the "P" key, no leave, and use the other hand press the "+" key, the screen will display the P-00, then press "S" key 3 seconds, it will Restore factory settings.



3. 系统界面连接和操作面板示意图如下:

Ustration for control panel



四、控制面板使用说明: Installation for Control Panel

1. 各按键的用途: Each key purpose:

(1) "P" 键 (1) "P" key

此键有两大用法: 第一个用处是直接按 "P" 键转换到上针孔灯亮为上停针, 下针孔灯亮为下停针, 两个灯孔都不亮为不停针;  
This key has two uses: The first use is to direct press "P" key to switch up or down needle position, if up pinhole lamp lights means up needle position, if down pinhole lamp lights means down needle position, if two lamps off means no needle position.

第二个用处是: 功能进入键下面第2点有介绍。

The second use is: Function Enter button, below point 2 are described below.



## 五、一般故障处理: Common faults and treatments

序号 The serial number	错误码 Error code	错误内容 Error content	错误问题的多种可能 Several possible error problem
1	Er01:	找不到停针位	1.手轮靠的不够近间隙在2mm内, 2.九针插头接触不良 3.电机霍尔环,要更换电机, 4.手轮上的磁铁掉落。 1.The handwheel is not close, clearance within 2 mm. 2. Nine plug contact undesirable 3. Motor HuoEr bad, to replace the motor. 4. The handwheel magnet in the loss.
2	Er02:	开机没有检测到调速器 Not detected boot speed regulator	1.调速器插头没有插, 2.调速器线断了 1.Speed control device without plug, 2. Speed wire is broken
3	Er03:	电机霍尔或相位线错误 Motor HuoEr or phase error	1.九针插头接触不良, 2.电机没有按装好 3.霍尔环 1. Nine hole plug contact undesirable, 2. The motor doesn't pack good, 3. HuoEr bad
4	Er04:	堵转保护 Locked-rotor protection	1.电机过载 2.电机与电控相连接的四心线接触不好。 1. The motor overload, 2. The motor and the controller connected four hole line contact is not good
5	Er05:	硬件过流保护; Hardware over-current protection;	1.电机过载, 2.信号线接触不好或断了, 1. Motor overload, 2. Line contact is bad or broken,
6	Er07:	串口通信超时错误 serial port communication timeout error	显示屏至主板信号线不良或主板坏, Display to the system board signal bad or bad,

## 4.电机常用参数设置: Commonly used parameter setting

序号 The serial number	参数编号 Parameters of the code	参数名称 The parameter name	参数范围 Adjusting range	出厂设置 The factory reset Settings	备注 Other
1	P-01	最大速度锁定 Maximum speed lock	200-6500RPM	4500转	
2	P-02	电机方向 Direction of rotation	0是逆时针 1是顺时针 0 is reverse 1 is a clockwise turn	1	老款平缝电机调到2或3
3	P-03	下停角度 The needle Angle	6-18度	12度	
4	P-04	起缝速度 Start sewing speed	200-800转	250转	
5	P-05	加速快慢 Speed up and slow	2000-4000转	3500转	
6	P-06	定针缝 Set the seam	0-999针	0	
7	P-07	空			
8	P-08	空			
9	P-09	空			
10	P-10	自动间隙运行 (离合) Automatic clearance run (run)	把0改成1再按S键 Then press the S key change 0 to 1	0	关掉电源停止跑合 Turn off the electricity stopped running
11	P-11	抬压脚启动时间 Presser foot ascend starting time	0-2000ms	0	
12	P-12	抬压脚保护时间 Ascension presser foot protection time	1-120 s	4 s	
13	P-13	老款平车电机选择 Old motor selection	1是老款平缝机电机 Motor option 1 is the old one	0	0是普通机 0 is ordinary sewing machine
14	P-14	最大电流限制 Maximum current limiting	50-1000	280	
15	P-15	是否检测上针位 The location of the needle	1:检测针位, 0:不检测 1: detecting needle 0: no detection	1	



## 六、作业环境要求: Environmental Requirements

1. 请不要在过潮湿环境中作业  
Please do not work at damp place
2. 用户供电应保持稳定 210V~240V  
The voltage requires being stable (210V -240V)
3. 用户使用前必须接地, 确保人身安全  
Must be adequately grounded for safety
4. 不要在过热地方作业  
Do not work at high temperature
5. 控制系统与电机不要在强磁高辐射环境中作业,  
以免干扰而使系统错误  
Do not run motor and control system near to ferromagnetic or high-radiance area

## 七、保修服务: Warranty Service

1. 本产品自购买起免费保修1年, 终身维护。保修期内除人为损坏以外出现任何质量问题可免费维修。

Our products come with 1 year of quality guarantee, from the ship day. Within guarantee period, service is free of charge, unless man-made damage or misuse.

2. 在保修期内, 以下情况出现损坏本公司不给予保修服务。

During the guarantee period, our free service does not cover below:

- A. 未经本公司同意自行拆卸, 修理, 改装造成的故障或损坏。  
Dismantle the motor unit without permission, and cause damage.
3. 但凡出现无法解决的问题可以联系本公司。  
Please contact us whenever have problem.

## 八、装箱单: Packing List

电机定子	Stator	1
电机转子	Rotor	1
控制箱	Control Box	1
手轮	Hand wheel	1
脚踏板连接杆	Pipe link	1
内六角螺丝	Hexagon screw	6
定位护套	Locator bush	1
风叶	Fan blade	1
脚踏板	Pedal	1
自攻螺丝	Self tapping screw	6
说明书	Manual	1
合格证	Quality Certificate	1