

一体机节能直驱使用说明书

All-in-one Direct Drive Instruction Book

欢迎使用本公司产品，制衣行的正确投资选择！

Welcome to use the our products, it is the right investment choices in garment industry!

本说明书为本公司新研发的“一体机节能直驱控制箱”产品参考手册，请认真阅读此手册以更好运用本公司产品。

一、安全说明：General Safety Instructions

1：电机电控接通电源时（开机状态）请不要把脚放在脚踏板上

Do not put your feet on the pedals when the control box and motor is switched on (boot status)

2：本产品请专业人士安装调试

Let professionals to install and debug this product

3：严禁在通电时打开控制箱与电机端盖

Do not open the control box and the motor cover when energized

4：换针，穿线或更换底线时请关闭电源

Please turn off the power when changing the needle,threading or replacing the bottom line

5：安装，拆卸维修时请拔掉电源插头

During installation and removal service,please turn off the power and pull the plug

6：翻抬缝纫机时请关闭电源

Please turn off the power when turn lift sewing machine

7：使用本产品请远离高频电磁波和电波发射器等，以免所产生的电磁波干扰伺服驱动器而发生错误动作。

When use this product, please stay away from high-frequency electromagnetic waves and radio wave transmitters, etc., in case the electromagnetic waves generated interfere with the servo drive to occur wrong action .

郑重申明：

Solemnly Declare:

1：不遵守安全使用说明操作规章，发生意外后果自负。

Do not comply with the manual book operating regulations and the safety requirements, all accidental occurrence should be taken by yourself.

2：未经本公司授权，请勿擅自改动产品，由此而引起的后果本公司不负任何责任。

Without our authorization, please do not alter our products, our company is not liable for any consequences arising therefrom.

二、产品介绍:Product Instruction

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

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

本控制系统体现出了超前的设计理念,系统操作简单易上手,整个控制系统性能优越。具有起步快,停车快、准等优点。而且电路模块保护功能完善:有欠压,过流,过热等一系列保护功能。踏调速器可实现无级调速。

This control system features is easy to use and features in excellent performance, including quick start, quick stop (sewing machine), accurate needle Position. Furthermore, the modular circuit has Self-Protection System when against lower voltage, over current, over heat etc. Speed stepless is realized by the pedal speeder.

2. 性能参数指标:Specifications

电源供电电压 Voltage	220V 两相 2 phase
频率 Frequency	50~60HZ
电机转速 Speed	200-6000RPM
电机扭矩 Motor torque	$\leq 3.0\text{NM}$

3. 系统按键图如下:The system key diagram is as follows



三、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)有介绍

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

(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 on lamp on the head.

The second use is to function parameters(confirm)key, point2 are described below

(3) “+ ” “- ” 键(3)"+"-"key

此两个键是转速调整用。 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调到逆时针转

第一步:先打打开电源;

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-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

(“0” 为顺时针转, “1 ” 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 clock wise 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-02, (p-02)is a motor clockwise or Counterclockwise wise 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)

Step Six: Press the “S”key to determine the parameters, save and exit the parameter.

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 seconds, it will Restore factory settings.

四、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 Settings	备注 Other
1	P-01	最大速 Maximum speed	200-6500RPM		4500 转	
2	P-02	电机方向 Direction of rotation	1 是逆时针转 0 is counter clockwise	0 是顺时针转 “1” is clockwise turn	0	
3	P-03	下停角 The needle Angle	6-18 度		12 度	
4	P-04	起缝速度 Start sewing speed	200-800 转		200 转	
5	P-05	加速快慢 Speed up and slow	300-1350 转		900 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 (跑合) Automatic	把 0 改成 1 再按 S 键 Then press the S key change to 1		0	关掉电源停止跑合 Turn off the

		clearance run (run)			electricity stopped running
11	P-11	抬压脚起动时间 Presser foot ascend starting time	0-2000ms	0	
12	P-12	抬压脚保护时间 Ascension presser foot protection time	1-120s	5s	
14	P-14	最大电流限制 Maximum current limiting	100-500	400	
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	

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:	找不到停车位 No stop signai	1. 定位器信号插头未插好 2. 定位器感应位置靠近一点与磁铜 (1mm-15mm)距离 1. locator signal plugs not inserted 2. the locator induction position close to the point keep 1mm-1.5mm distance and magnetic steel
2	Er02:	开机没有检测到调速器 Not find the speed controller	1. 调速器插头没有插 2. 调速器线断了 1. Speed control device plug is not insert. 2. Speed controller wire is broken
3	Er03:	电机霍尔或相位线错误 Motor Hall or phase error	1. 九针插头接触不良: Nine hole plug contact undesirable 2. 电机没有安装好: The motor doesnt install good 3. 霍尔坏: Hall bad

4	Er04:	堵转保护 Lacked-rotor protection	1. 电机过载 2. 电机与电控根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.The motor overload 2.Signal wire not good or broken
6	Er07:	串口通信时错误 Serial per communication	显示屏至主板信号线不良或主板坏 Display to the system board signal bad or bad

六、作业环境要求: Environmental Requirements

1. 请不要在过潮湿环境中作作业

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 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:

(1). 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	Motor	1
控制箱	Control Box	1
自攻螺丝	Selftapping screw	1
电机固定螺螺丝	Motor fixing screw	3
脚踏板	Pedal	1
脚踏板连接杆	Pipe link	1
说明书	Manual	1

