

# 全自动高速绷缝机说明书



## 安全事项:

- 使用本产品前，请先阅读本《操作手册》及所搭配的缝制机械说明书。
- 必须由接受过专业培训的人员来安装调试或操作。
- 本产品仅适用于指定范围的缝制机械，请勿移做他用。
- 请尽量远离高频高辐射设备，以免干扰本控制器误动作。
- 对控制箱进行安装维护时，请先关闭电源并拔掉插头。
- 请确保用电及设备可靠接地，以防止干扰和漏电事故。
- 所有维修用零件须由本公司提供或认可，方可使用。
- 在进行控制箱的维修保养前，必须先关闭电源并拔掉插头，并由专业人员进行操作。

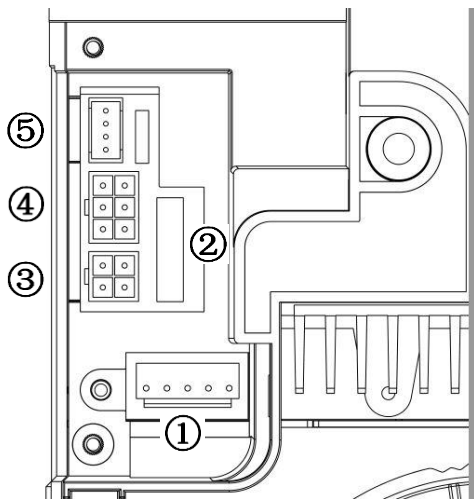
## 1. 产品说明

### 1.1 产品规格

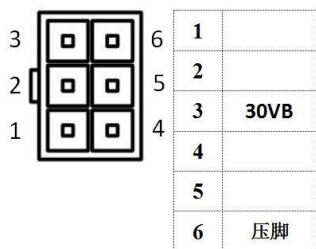
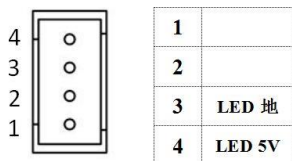
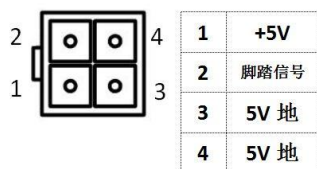
工作电压	AC 220V $\pm$ 10% 50/60HZ	AC 110V $\pm$ 10% 50/60HZ
额定功率	550W	550W
电机扭矩	$\leq 3$ N·M	$\leq 3$ N·M

### 1.2 接口插头说明

- ① 电机相线端口
- ② 电机编码器端口
- ③ 脚踏板端口
- ④ 抬压脚功能端口
- ⑤ 缝台灯端口



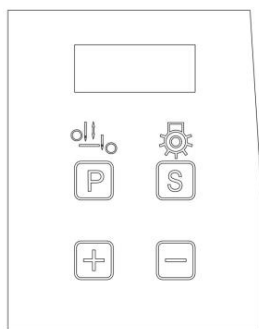
### 1.3 接口定义



※ 请遵照接口定义及端子颜色相连接，如插不进去，请检查插座与针是否变形。

## 2. 操作面板使用说明

### 2.1 面板各按键功能说明



序号	图标	功能	按键功能描述
1		P 键	待机界面：短按切换上下停针位； 参数界面：短按进入或退出参数；
2		+ 键	待机界面：增加转速； 参数界面：参数加；
3		- 键	待机界面：降低转速； 参数界面：参数减；
4		S 键	待机界面：缝台灯开关； 参数界面：参数确认，保存；
组合键			
1			按住 P 键再按+键，进入参数界面；
2			按住 P 键再按-键，进入监控参数界面； 1. 主板版本号 2. 面板版本号 3. 实时转速 4. 脚踏电压监测 5. 母线电压监测 6. 故障码 7. 编码器信号监测 8. 电机固定角
校准电机角度步骤			
1			按住 P 键再按 S 键，进入调节界面；
2			按+键修改数值 1；
3			按 S 键确认，电机自动运转校准，等待停机后，长按 S 键返回；
校准上针位			
1			按住 P 键再按 S 键，进入调节界面；
2			按+键修改数值 2；
3			按 S 键确认，转动手轮至上针位位置，等显示界面的数值不再变化后，按 S 保存；

### 3. 系统参数设置

#### 3.1 参数模式

1. 待机界面，按住  +  进入用户参数设置；

2. 按   键选择参数，按  键进入参数，按  键可返回；

参数号	中文名称	取值范围	默认值	参数说明
P01	最高转速	200~5500	4000	电机最高转速
P02	抬压脚开关	0~1	1	打开关闭抬压脚功能
P03	保留			
P04	保留			
P05	保留			
P06	保留			
P07	跑合模式开关	0~1	0	跑合模式开关
P08	跑合模式运转时间	1~60	3	跑合模式运转时间, 单位: 秒
P09	跑合模式停止时间	1~60	2	跑合模式停止时间, 单位: 秒
P10	保留			
P11	抬压脚确认时间	0~500	50	抬压脚确认时间
P12	抬压脚全额输出时间	0~500	250	抬压脚全额输出时间
P13	抬压脚保持功率	0~100	30	抬压脚保持功率
P14	抬压脚保护时间	0~60	10	抬压脚保护时间
P15	软着陆 1 段参数	0~500	60	
P16	软着陆 2 段参数	0~500	10	
P17	软着陆 3 段参数	0~500	40	
P18	保留			
P19	保留			
P20	保留			
P21	脚踏曲线	0~100	70	
P22	脚踏低速区速度	100~1500	200	

P23	脚踏全后踏电压值	0~5000	300	
P24	脚踏半后踏电压值	0~5000	500	
P25	脚踏停车电压值	0~5000	1250	
P26	脚踏起转电压值	0~5000	1550	
P27	脚踏低速区电压值	0~5000	1800	
P28	脚踏最大电压值	0~5000	2500	
P29	保留			
P30	保留			
P31	机头最高转速限制	200~5500	4500	最高转速锁定
P32	保留			
P33	上停针位置	0~1440	640	
P34	下停针位置偏转角度	0~1440	180	
P35	保留			
P36	保留			
P37	保留			
P38	保留			
P39	母线电压限定值	300~500	470	
P40	保留			
P41	保留			
P42	保留			
P43	大电流报警检测值	0~30	15	
P44	反转次数检测值	0~9999	15	
P45	缝台灯亮度	1~10	5	
P46	缝台灯开关	0~1	1	
P47	保留			
P48	保留			
P49	保留			
P50	保留			

### 3.2 故障码

指示码	代码含义	解决方法
ER-02	开机时脚踏未处于中立状态	1. 检查脚踏是否接触良好或者有无损坏
ER-03	电机反转	1. 尝试重新校准电机
ER-04	电机堵转	1. 检查机械是否过重或卡死 2. 关闭电源，再重新上电尝试修复 3. 更换控制器
ER-05	电控过流报警	1. 关闭电源，再重新上电尝试修复 2. 更换控制器
ER-06	电机零点检测异常	1. 检查编码器信号 2. 尝试更换电机
ER-09	电机持续大电流工作	1. 校准电机后查看电控功率 2. 更换控制器

# Industrial High Speed InterLock Sewing Machine



## Safety Precautions:

- Before using this product, please read this Operation Manual and the sewing machine manual.
- Commissioning or operation must be performed by trained personnel.
- This product is only suitable for the sewing machine of the specified range. Do not use it for other purposes.
- Please keep away from high-frequency and high-radiation equipment as much as possible to avoid interference with the malfunction of this controller.
- When installing and maintaining the control box, turn off the power and unplug it.
- Make sure that the power and equipment are reliably grounded to prevent interference and leakage.
- All repair parts must be supplied or approved by the company before they can be used.
- Before performing maintenance on the control box, the power must be turned off and the plug removed and operated by a professional.

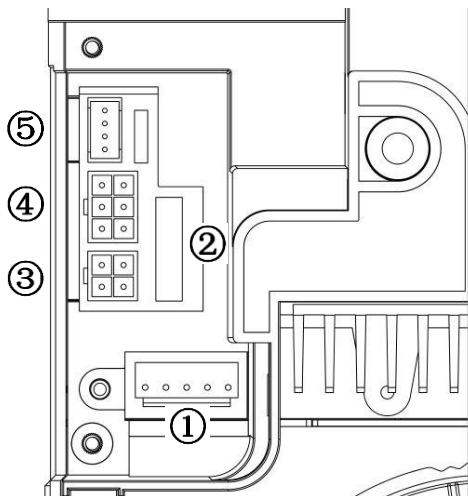
## 1. Product Description

### 1.1 Product Specifications

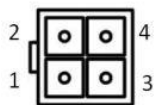
Operating Voltage	AC 220V $\pm$ 10% 50/60HZ	AC 110V $\pm$ 10% 50/60HZ
rated power	550W	550W
Motor torque	$\leq$ 3 N·M	$\leq$ 3 N·M

### 1.2 Interface plug description

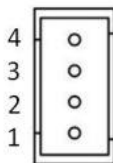
- ① Motor port
- ② Motor encoder port
- ③ Pedal port
- ④ Presser foot port
- ⑤ LED light outlet



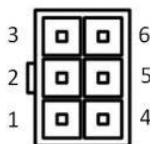
## 1.3 Interface definition



1	+5V
2	PED GND
3	GND
4	GND



1	
2	
3	GND
4	5V

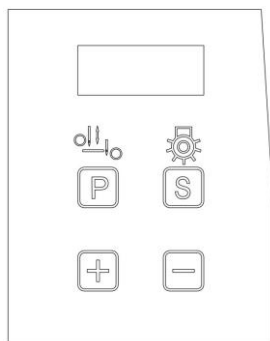


1	
2	
3	30V
4	
5	
6	Presser foot













※ Please follow the interface definition and the color of the terminal. If it is not inserted, please check if the socket and the needle are deformed.

## 2. Operation Panel Instructions

### 2.1 Panel Function Description







NO.	Icon	Button	Button function description
1		P KEY	Under the working model, switch the UP-down needle position; under the parameter model, setting the parameter;
2		+ KEY	Under the working model, adjust the motor speed; under the parameter model, choice and adjust parameter;
3		- KEY	Under the working model, adjust the motor speed; under the parameter model, choice and adjust parameter;
4		S KEY	Under the working model, open and close the LED Ligth; under the parameter model, save the parameter;
<b>Key combination</b>			
1			Hold down the P key and then press the + key to enter the parameter interface;
2			Hold down the P key and then press the -key to enter the monitoring parameter interface;  1. Motherboard version number 2. Panel version number 3. Real-time speed 4. Pedal voltage monitoring 5. Bus voltage monitoring 6. Fault code 7. Encoder signal monitoring 8. Motor fixed angle
<b>Steps to calibrate the motor angle</b>			
1			Hold down the P key and then press the S key to enter the adjustment interface;
2			Press the + key to modify the value 1;
3			Press the S key to confirm, the motor will automatically run and calibrate, after waiting for the shutdown, long press the S key to return;
<b>Calibrate the upper needle position</b>			
1			Hold down the P key and then press the S key to enter the adjustment interface;
2			Press the + key to modify the value 2;
3			Press the S key to confirm, turn the hand wheel to the upper needle position, and after the value on the display interface no longer changes, press S to save;

### 3. System Parameter Setting

#### 3.1 Parameter mode

1.Power is on, press the button  +  to enter the User parameter setting;

2.Press the button  or  to select the parameter, press the  key into the parameter, press

the button  to save the modified parameters.

NO.	Parameter name	Ranges	Defaults	Parameter Description
P01	Maximum speed	200~5500	4000	Sewing speed
P02	Automatic presser foot switch	0~1	1	Automatic presser foot switch
P03	Reserved			
P04	Reserved			
P05	Reserved			
P06	Reserved			
P07	Automatic running switch	0~1	0	Automatic running switch
P08	Running time	1~60	3	Running time
P09	Stop running time	1~60	2	Stop running time
P10	Reserved			
P11	Lifting foot confirmation time	0~500	50	Lifting foot confirmation time
P12	Lift the foot full time	0~500	250	Presser foot electromagnet full force output time
P13	Presser foot Hold power	0~100	30	Presser foot Hold power
P14	Presser hold time	0~60	10	Presser hold time
P15	Presser foot soft	0~500	60	

	landing parameter 1			
P16	Presser foot soft landing parameter 2	0~500	10	
P17	Presser foot soft landing parameter 3	0~500	40	
P18	Reserved			
P19	Reserved			
P20	Reserved			
P21	Foot Pedal curve	0~100	70	
P22	Foot low speed	100~1500	200	
P23	Foot pedal full voltage value	0~5000	300	
P24	Foot pedal half step voltage value	0~5000	500	
P25	Foot stop voltage value	0~5000	1250	
P26	Foot rotation voltage value	0~5000	1550	
P27	Foot low speed zone voltage value	0~5000	1800	
P28	Foot pedal maximum voltage value	0~5000	2500	
P29	Reserved			
P30	Reserved			
P31	The locked highest speed	200~5500	4500	The locked highest speed
P32	Reserved			
P33	Upper needle	0~1440	640	Upper needle position

	position			
P34	Upper needle position angle	0~1440	180	
P35	Reserved			
P36	Reserved			
P37	Reserved			
P38	Reserved			
P39	Bus voltage Limit value	300~500	470	
P40	Reserved			
P41	Reserved			
P42	Reserved			
P43	High current detection	0~30	15	High current detection
P44	Number of reversals Detect	0~9999	15	
P45	Sewing table lamp brightness	1~10	5	
P46	Sewing table lamp switch	0~1	1	
P47	Reserved			
P48	Reserved			
P49	Reserved			
P50	Reserved			

### 3.2 Error Code

Indicator code	Code meaning	Solution
ER-02	The pedal is not in neutral when it is turned on	1. Check if the pedal is in good contact or damaged.
ER-03	Motor reverse	1. Try to Recalibration the motor
ER-04	The motor blocking	1. Check if the machine is stuck or not. 2. Check if the motor line is loose. 3. Replace the motor 4. Replace the controller and contact the factory
ER-05	Motor drive circuit over current alarm	1. Check if the machine is too heavy or stuck. 2. Turn off the power and then power it on again. Try to repair. 3. Replace the controller and contact the factory.
ER-06	Power-on to find self-calibration failed	1. Check if the motor wire is loose 2. Replace the motor encoder
ER-09	Continuous high current operation	1. Turn off the power, then power it on again and try to repair 2. Replace the controller