

一、安全上的注意事项

使用前请详细阅读本技术资料与所搭配的缝制机械说明书，配合正确使用。

- 1.1 (1) 电源电压与工作频率：请遵照马达与控制箱铭牌所标之规格。
- (2) 电磁波干扰：请远离高频微波机器或电波发射器等，以免所产生的电磁波干扰本驱动装置因而发生错误动作。
- (3) 接地：为防止杂讯干扰或漏电事故，请做好接地工程（包括缝纫机、马达、控制箱）。
- 1.2 拆卸马达或控制箱时，勿带电拔插；控制箱里面有危险高压电，所以关闭电源后要等 1 分钟以上方可打开控制箱盖。
- 1.3 为保证人身安全，请在维修机械或进行穿针作业时关闭电源。
- 1.4  这个标志符号表示机器安装时，如有错误恐会伤害到人体或机器会受到损坏。所以机器方面有危险性的地方会有此标志。
-  这个标志符号表示有高压电等，电气方面有危险性的地方会有此标志。
- 1.5 本装置保证在正常工作情况且无人为失误的操作下，保修期为一年。

二、操作说明

2.1 恢复出厂设置

在关机状态下，同时按住+/-键开机，再按 S 键确认即可恢复。

2.2 监控模式

长按 S 键进入到监控状态，按+/-键进行变更监控序号，按 S 键查看。

2.3 工作界面

工作界面：显示“0. 00”。从左往右数，第一个数码管会动态显示旋转方向，第二个数码管无显示，第三个数码管表示上/下针位设置，第四个数码管表示软启动设置。

上/下针位调节：短按“P”键，切换上/下针位。上针位指示灯亮时，为上停针，第三个数码管显示“0”；下停针指示灯亮时，为下停针，第三个数码管显示“1”；指示灯不亮，关闭停针功能，界面显示变为“0”。

衣车灯开关：短按 键，调节衣车灯开或关，指示灯亮表示打开，指示灯灭表示关闭。

2.4 老化模式

方法 1：同时按住 P 键开机，开机后按“+”键，把 P26 参数改为 1，开始老化。

方法 2：进入参数界面后，P26 改为 1，开始老化。（注：P26 改为 0 退出老化）

三、监控模式

显示序号	项目名称	单位
SPd	速度	RPM
CUr	电流	0. 1A
UdC	电压	V
PdL	踏板	/

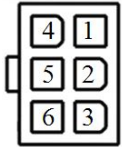
显示序号	项目名称	单位
HALL	霍尔	/
id	机型	/
vEr	版本	/

四、按键说明

功能参数编辑键		1：工作模式下，切换上、下停针位 2：参数模式下，作参数设置 3：输入密码时，移位键
参数查看保存键		1：工作模式下，开关机头灯 2：参数模式下，作参数保存
上选择键		1：工作模式下，调节电机转速 2：参数模式下，作参数的选择及调整
下选择键		1：工作模式下，调节电机转速 2：参数模式下，作参数的选择及调整

五、电控接口定义

定义	补针（信号）	预留	衣车灯（信号）
脚位	1PIN	2PIN	3PIN
定义	补针（地线）	预留	衣车灯（5V）
脚位	4PIN	5PIN	6PIN



六、故障说明

错误码	故障内容	故障原因	检查项目、处理
E-01	系统电压过高	实际电压偏高 制动回路故障 电压检测有误	系统进线电压是否过高 制动电阻是否工作正常 系统电压检测回路是否工作正常
E-02	系统电压过低	实际电压偏低 电压检测有误	系统进线电压是否过低 系统电压检测回路是否工作正常
E-05	踏板故障	踏板辨识故障	踏板接头松动
E-07	电机超负荷	电机堵转 电机超负荷	电机插头是否接触良好 机头或剪线机构是否卡死 是否缝制规格厚度以上布料 电流检测信号是否正常
E-09	停针信号故障	停针位故障	停针基片是否安装到位
E-11	霍尔传感器故障	电机定位信号故障	电机编码器接口是否接触良好
E-15	电机电流过大	电流检测非正常 电机运转非正常	系统电流检测回路是否工作正常 电机信号是否正常
E-17	翻抬开关故障	翻抬开关有效	放下机头或者检查翻抬开关
E-18	软件过流	电机持续大电流运行	检查电机装配或者电控
E-19	电机超载	电机长时间超负荷运行	检查机头电机是否适配
E-20	参数读写故障	参数读出或者保存故障	检查或更换电控
E-21	电流检测回路故障	电控电流检测硬件电路故障	检查或更换电控
E-22	OZ 回路故障	OZ 回路检测异常	检查 OZ 回路是否正常

七、参数列表（机型：普通单直驱 DP）

参数项	中文说明	范围	初始值	级别	内容值名称说明与备注
P-00	界面缝纫速度	200～5000	2000	I	缝纫最高转速，不同机型，速度不同
P-01	最高转速	200～5000	2500	I	缝纫最高转速，会限制 P00 参数最大值
P-02	停针位选择	0～2	1	I	0：上停针；1：下停针；2：无定位
P-03	软启动开关	0～1	0	I	0：关；1：开
P-04	软启动速度	200～1500	400	I	软启动速度
P-05	软启动针数	1～15	1	I	软启动针数
P-06	最低转速	200～500	200	I	车缝时的最低转速设定
P-07	上针位调节	0～23	1	I	上针位调节
P-08	下针位调节	0～23	9	I	下针位调节
P-09	开机找上针位	0～1	1	I	0：开机不找上针位；1：开机找上针位
P-10	机头翻抬保护开关	0～2	1	I	0：不检测；1：检测零信号；2：检测正信号
P-11	加速曲线调整	0～4	1	I	控速器的加速爬升斜率设定
P-13	衣车灯开关	0～1	1	I	0：关；1：开
P-15	补针方式	0～4	2	I	0：半针；1：一针；2：连续补半针；3：连续补一针；4：不补针
P-21	马达运转方向	0～1	1	II	0：顺时针；1：逆时针
P-22	自动跑合速度	200～5000	2000	I	自动跑合速度的设置
P-23	自动跑合跑时间	1～250	20	II	自动跑合跑时间设置
P-24	自动跑合停时间	1～250	20	II	自动跑合停止时间设置
P-25	A 项测试	0～1	0	II	速度持续运行 0：关；1：开
P-26	B 项测试	0～1	0	II	执行定位循环运行 0：关；1：开

1.Safety precautions

- Before use, please read this manual and lockstitch machine's manual at the same time, thanks for your cooperation.
- 1.1 (1) The voltage and working frequency: please according the name plate of motor and controlling box.
- (2) Electromagnetic interference:Please stay away from high-frequency magnetic wave machines or Radio wave transmitter etc.In order to prevent the generated electromagnetic waves from interfering with the drive device and causing wrong action.
- (3) Grounded:To prevent noise interference or leakage accidents,Please do grounding works including sewing machine, motor and control box.
- 1.2 If Disassemble motor and controlling box,please Turn off the power in advance.Dangerous high voltage electricity in the electric control box, so please waiting more than 1 mins after Turn off the power, then to disassemble the control box
- 1.3 To ensure the safety of life,Please turn off the power when repair the machine or threading needles.
- 1.4  This symbol indicates when the machine is installed,if made a mistake,the human body or the machine may be damaged,Therefore, there will be this mark in the dangerous place of the machine.
-  This symbol indicates that there is high voltage, etc.Electrically dangerous places have this mark.
- 1.5 This products guarantees a one-year warranty under normal working conditions and no-one error operation.

2.Instructions

- 2.1 **Reset**
- In the shutdown state, press +/- at the same time to turn on, then press the "S" key to confirm to recover.
- 2.2 **Monitoring mode**
- Long press the “S” to enter the monitoring state, press +/-to change the monitoring serial number, press the “S” to check.
- 2.3 **Work interface**
- Working interface: Displays "0.00". Counting from left to right, the first digital tube dynamically displays the rotation direction, the second digital tube remains silent, the third digital tube indicates the up/down needle position setting, and the fourth digital tube indicates the soft start setting.
- Up/Down Needle Position Adjustment: Short-press the "P" key to toggle between the up/down needle positions. When the up needle position indicator is on, the needle is stopped at the upper position, and the third digital tube displays "0". When the down needle position indicator is on, the needle is stopped at the lower position, and the third digital tube displays "1". When the indicator is off, the needle stop function is disabled, and the interface display changes to "0".
- Sewing Machine Light Switch: Short-press the  key to turn the sewing machine light on or off. The indicator light indicates on, and the indicator light indicates off.
- 2.4 **Aging mode**
- Way 1:press "P" button,then switch on,press "+",choose parameter P-26.press S change the value for 1 machine start auto running,change value for 0,stop auto running

3.Monitoring mode

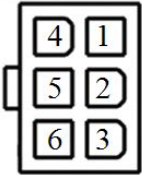
Display	Item	unit		Display	Item	unit
SPd	Speed	RPM		HALL	HALL	/
CUr	Current	0.1A		id	Model	/
UdC	Voltage	V		vEr	Version	/
PdL	Pedal	/				

4.Key Description

Function parameter edit		1: In operating mode, switches the upper and lower needle stop positions. 2: In parameter mode, sets parameters. 3: When entering a password, the shift key
Parameter view save		1: In working mode, turn on or off the headlight 2: In parameter mode, save parameters
Up selection		1: In operating mode, adjust the motor speed. 2: In parameter mode, select and adjust parameters.
Down Select		1: In operating mode, adjust the motor speed. 2: In parameter mode, select and adjust parameters.

5.Electrical control

Definition	Signal (inching for add stitch)	Reserve	Signal (light)
Foot position	1PIN	2PIN	3PIN
Definition	Ground wire(Jog needle)	Reserve	5V(Sewing lights)
Foot position	4PIN	5PIN	6PIN



6.Failure description

Error code	Fault content	Reason	Inspection items and how to fix
E-01	System voltage is too high	Actual voltage is too high Incorrect voltage detection	Whether the incoming line voltage of the system is too high Whether the system voltage detection circuit works normally
E-02	System voltage is too low	Actual voltage is low Incorrect voltage detection	Whether the incoming line voltage of the system is too low Whether the system voltage detection circuit works normally
E-05	Pedal ID failure	Pedal recognition failure	Loose pedal joint
E-07	Motor overload	Motor blocked Motor overload	Whether the motor plug is in good contact Whether the machine head or trimming mechanism is stuck Whether to sew fabrics above the specification thickness Whether the current detection signal is normal
E-09	Motor signal failure	Motor positioning signal failure	Whether the motor encoder interface is in good contact Whether the needle stop substrate is installed in place
E-11	Hall sensor failure	Motor positioning signal failure	Is the motor encoder interface in good contact
E-15	Hardware overcurrent	Current detection is abnormal The motor is running abnormally	Whether the system current detection circuit is working normally Whether the hardware drive device is working normally
E-17	Flip switch failure	Flip switch effective	Put down the machine head or check the flip switch
E-18	Software overcurrent	The motor runs continuously at high current	Check motor assembly or electronic control
E-19	Motor overload	The motor is overloaded for a long time	Check whether the motor of the machine head is suitable
E-20	Parameter read and write failure	Parameter reading or saving failure	Check or replace the electronic control
E-21	Current detection circuit failure	Electronically controlled current detection hardware circuit failure	Check or replace the electronic control
E-22	OZ loop failure	OZ loop detection abnormal	Check whether the OZ circuit is normal

7.Parameter list

Parameter	Description	Range	Initial value	level	Content value name description and remarks
P-00	Interface sewing speed	200~5000RPM	2000	I	Maximum speed setting for sewing
P-01	Maximum speed	200~4000RPM	3500RPM	I	Maximum speed setting during sewing
P-02	Synchronizer selection	0~2	1	I	"0" mean Needle up, "1" mean Needle down , "2" mean without signal
P-03	Soft start switch	0~1	0	I	"0" mean turn off, "1" mean open
P-04	Soft start Speed	200~1500RPM	400	I	Soft start speed function setting
P-05	Number of soft start stitches	1~15	1	I	1-15 Number of soft start pins
P-06	Minimum speed	200~500RPM	200	I	Minimum speed setting during sewing
P-07	Upper needle position adjustment	0~24	0	I	Machine head position adjustment
P-08	Down needle position adjustment	0~24	12	I	Position adjustment of lower needle stop
P-09	Automatically find the needle position when starting up	0~1	0	I	"0" mean can't find upper needle position adjustment, "1" mean find upper needle position adjustment
P-10	machine head protection switch detection	0~2	1	I	"0" mean no detection, "1" Detect zero signal, "2" mean Detect positive signal
P-11	Acceleration curve adjustment	0~4	1	I	Speed controller acceleration and climb slope setting
P-13	Sewing machine light switch	0~1	1	I	0: Off 1: On
P-15	Needle supplement method	0~4	3	I	"0" mean Half stitch, "1" mean One stitch, "2" mean Continuous half stitch, "3" mean Continuous one stitch, "4" mean Needle supplement off
P-21	Motor running direction	0~1	1	II	"0" mean Clockwise, "1" mean Counterclockwise
P-22	Automatically running speed	200~3700RPM	3500	I	Setting automatically check speed
P-23	Automatic running time	1~250	20	II	Automatic running-in time setting
P-24	Automatic stop time	1~250	20	II	Automatic running-in pause time setting
P-25	A item test	0~1	0	II	Speed continuous operation "0" mean turn off, "1" mean open
P-26	B item test	0~1	0	II	Perform positioning cycle operation "0" mean turn off, "1" mean open