

# 平缝单剪线系列说明书

Lockstich Trimmer Series Instructions




## 安全指示

### Safety instructions

1) 在安装或使用本产品时，使用者必须彻底并仔细研读本操作手册。

When installing or using this product, the user must thoroughly and carefully read this manual.

2) 所有  标上 符号的指示，必须特别注意或执行， 否则可能会导致身体伤害。

All symbolized instructions must be paid special attention to or executed, otherwise they may cause bodily injury.

3) 本产品须由受过正确训练的人员来安装或操作。

This product must be installed or operated by properly trained person.

4) 为安全起见，禁止以延长线作电源座供应二项以上的电器产品使用。

For the safety, it is forbidden to supply more than two items of electrical products with extended wires as power base.

5) 当连接电源线到电源座时，必须确定此电压低于 AC 250V，且符合标在马达铭牌上的指定电压。（电压范围 AC175V~270V）符合国家标准

※注意：电控箱电源规格如为 AC220V 时，请勿插接至 AC380V 的电源插座上，否则将出现异常且电机将无法动作。此时请立即关闭电源开关，重新检查电源。持续供应 380V 超过五分钟以上，将可能烧损电控箱上的保险丝、电解电容及电源模块，而危及人身安全。

When connecting the power cord to the power base, it must be determined that the voltage is lower than AC 250V and conforms to the indication marked on the motor nameplate.

Constant voltage. (Voltage range AC175V~270V) in line with national standards

※Attention: If the specification of the power supply of the electronic control box is AC220V, please do not plug into the power socket of AC380V, otherwise there will be abnormalities and the motor will not be able to move. At this time, please turn off the power switch immediately and re-check the power supply. Continuous supply of 380V for more than five minutes may burn fuses, electrolytic capacitors and power modules on the electronic control box, and endanger personal safety.

6) 请不要在日光直接照射的场所、室外及室温 45℃ 以上或 5℃ 一下的场所操作。

Please do not operate in direct sunlight, outdoor or at room temperature above 45℃ or below 5℃.

7) 请不要在暖气（电热器）旁、有露水的场所及在相对湿度 30% 以下或 95% 以上的场所操作。

Please do not do exercises beside the heater, in dew places and in places with relative humidity below 30% or above 95%.

8) 请不要在灰尘多的场所、具有腐蚀性物质的场所及有挥发性气体的场所操作。

Please do not operate in dusty places, places with corrosive substances and places with volatile gases.

9) 请注意电源线不要受压或过度扭曲。

Please note that the power cord should not be compressed or excessive distortion.

10) 电源线的接地线须以适当大小的导线和接头连接到生产工地的系统接地线，此连接必须

被永久固定。

The grounding wire of the power line shall be connected to the grounding wire of the system at the production site by a suitable size of wire and joint, which shall be permanently fixed .

11) 所有可转动的部分，必须以所提供的零件加以防范露出。

All rotatable parts must be protected from exposure by the parts provided.

12) 第一次开电后，先以低速操作缝纫机并检查转动方向是否正确。

After the first power-on, first operate the sewing machine at low speed and check whether the rotation direction is correct.

13) 在操作以下动作前，请先关闭电源：

1. 在控制箱与马达上插或拔任何连接插头时。
2. 穿针线时。
3. 翻抬车头时。
4. 修理或作任何机械上的调整时。
5. 机器休息不用时。

Turn off the power before operating the following actions:

1. When plugging or unplugging any connection plug between the control box and the motor.
2. When needling.
3. When turning over the head of the sewing machine .
4. Repair or make any mechanical adjustment.
5. When the machine is not in use.

14) 修理或高层次的保修工作，仅能由受过适当训练的机电技师来执行。

Repair or high-level warranty work can only be performed by properly trained mechanical and electrical technicians.

15) 所有维修用的零件，须由本公司提供认可，方可使用。

All repair parts shall be provided by our company recognized, can use.

16) 请不要以不适当物体来敲击或碰撞本产品及各装置。

Please do not knock or collide the product and its devices with inappropriate objects.

保修期限

Warranty period

本产品保修期限为购买日期起的一年内或出厂月份起两年内。

The warranty period of this product is within one year from the date of purchase or within two years from the date of manufacture.

保修内容

Warranty contents

本产品在日常情况且无人为失误的操作下，与保修期间无偿为客户维修使能正常操作。

Under normal condition and without human error, this product can be repaired and operated for free for customers during the warranty period.

但以下情况于保修期间将收取维修费用：

However, the following will be charged for maintenance during the warranty period:

1. 不当使用包括误接高压电源、将产品移做其他用途、自行拆卸、维修、更改、或不依规格范围使用进水、进油及插入异物于本产品。

1. Improper use includes incorrect connection of high voltage power supply, transfer the products to other uses, self-disassembly, maintenance, modification, or use of water, oil and

foreign matter in accordance with specifications.

2. 火灾、地震、闪电、风灾、水灾、盐蚀、潮湿、异常电压及其他天灾或不当场所造成的损害。

2. Damage caused by fire, earthquake, lightning, wind, flood, salt erosion, humidity, abnormal voltage and other natural disasters or improper places.

3. 客户购买后摔落本产品，或客户自行运输（或托付运输公司）造成的损害。

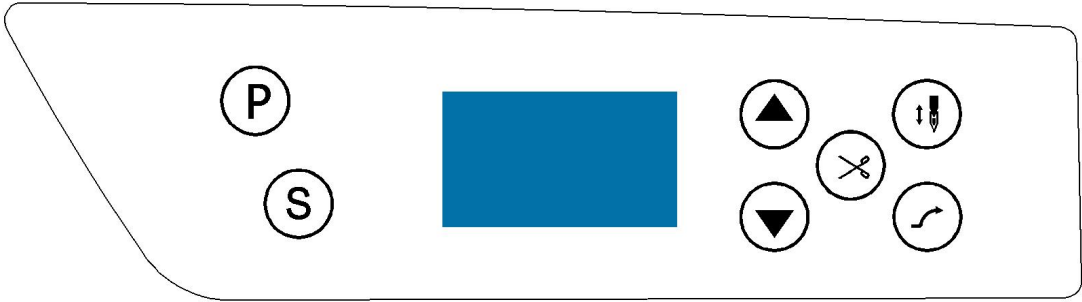
3. Damage caused by the customer's falling off the product after purchase or by the customer's own transportation (or consignment of the transport company).

\* 本产品在生产及测试上皆尽最大努力和严格控制使其达到高品质及高稳定的标准，但外部的电磁或静电干扰或不稳定的供应电源，仍可能对本产品造成影响或损害，因此操作场所的接地系统一定要确实做好，并建议用户安装故障安全防护装置（如漏电保护器）

\*This product has made great efforts and strict control in production and testing to achieve high quality and high stability standards, but external electromagnetic or static interference or unstable power supply may still cause impact or damage to the product, so the grounding system of the operation site must be done well, and it is recommended that users install failure safety protection devices (such as leakage protectors).

1 按钮显示及操作说明








1. Button display and operation instructions



1.1 按键说明

Key-press description

名称 Name	按钮 Press-but- on	注 明 Description	图标 Icon
进 入 和 确 定 存 储 保 存 键 Enter and determine storage save keys	S	进入参数项及其内容值如经调整变更后，需按下【S】键予以保存确认。注:参数保存直接按【S】键即可。 If the entry parameters and their content values are adjusted and changed, they need to be saved and confirmed by pressing the [S] key. Note: Save the parameters by pressing the [S] button directly.	S
切线功能快捷键 cutting line function shortcut key		1.设定使用或取消切线功能。 2 相应图标不亮时，表示关闭相应功能。 1. set use or cancel the cutting line function 2. When the corresponding icon is not bright, it means that the corresponding function is turned off.	
进 入 参 数 区 功 能 键 enter parameter function key	P	一般模式下按【P】键进入用户参数模式 按住【P】键开机进入技术员参数模式 Press the [P] key to enter the user parameter mode in general mode Press the [P] button to boot and enter the technician parameter mode	P
上下停针键 up and down needle stop position key		1: 上停针图标亮了表示停车时在上停针位 2: 下停针图标亮了表示停车时在下停针位 1: 上停针 icon is bright means it is the upper needle	











		stop position 2:  icon is bright means it is the down needle stop position	
慢速起缝 快捷键 Slow speed start sewing shortcut key		1、相应图标亮时，慢速起缝打开。 2、相应的图标不亮时，无慢速起缝功能 1. When the corresponding icon is bright, slow speed start sewing is open. 2. When the corresponding icon is not bright, there is no slow start sewing function.	
最高转速 设置键 the highest speed set key		加速键：速度不大于技术员设置的最高转速 Add speed key: Speed not greater than the maximum speed set by the technician	
		减速键：速度最小为 200 转/分钟 Down speed key: minimum speed 200 rpm	

## 1.2 液晶显示字体与实际字体对照表

### Contrast Table of LCD Fonts and Actual Fonts











数字字体部分：

















Digital font section:

实际数值 Actual value	0	1	2	3	4	5	6	7	8	9
液晶显示 LCD										

英文字体部分：





English font section:

英文字母 English Letter	A	B	C	D	E	F	G	H	I	J
液晶显示 Liquid crystal display										

英文字母 English Letter	K	L	M	N	O	P	Q	R	S	T
液晶显示 Liquid crystal display										
英文字母 English Letter	U	V	W	X	Y	Z				
液晶显示 Liquid crystal display										

功能调节：

Function adjusting:

- **自动找针位：**按住“P”键不放，同时按  键，屏幕显示数值 0，按“+”键将数值修改成 1，机器自动运行找原点，待机器停止后按“S”键确认。
- **Automatic needle position finding:** Hold button “P”, then press button , the display will show the value 0, add the value to 1 with button “+”, the machine will find the origin automatic, press button “S” to confirm.
- **挑线杆定位：**按住“P”键不放，同时按  键，屏幕显示数值，转动手轮，将挑线杆转到最高位，按“S”键确认。
- **Located thread take-up:** Hold button “p”, then press button , the display will show the value, turn the handwheel to adjust the thread take-up to the highest position, press button “S” to confirm.
- **修改最大速度：**短按“P”键，屏幕显示 P00，按“+”键至 P32，按“S”键进入参数，显示 3500，使用“+”、“-”键调节最大速度。
- **Adjust the maximum speed:** Press button “P”, the display will show P00, add it to P32 with the button “+”, press button “S” to enter the parameter, it will show the value 3500, adjust the maximum speed with the button “+” and “-”.
- **恢复出厂设置：**短按“P”键，屏幕显示 P00，按住“S”键 3 秒，显示屏返回至原始界面。
- **Restore factory setting:** Press button “P”, the display will show P00, hold button “S” for 3 seconds, the display will back to the original interface.

参数项 Parameter term	范围 Range	初始值 initial value	设定键 Setting key	说明 Description
在正常模式下按[P] Press [P] in normal mode				
P1	100~9999	3500	+ -	[1]最高转速 [1] Maximum Speed
P2	100~8000	1800	+ -	[2]前加固速度 [2] Front reinforcement speed
P3	100~8000	1800	+ -	[3]后加固速度 [3] Back reinforcement speed
P4	100~8000	1800	+ -	[4]连续缝速度 [4] Continuous sewing speed
P5	100~8000	3500	+ -	[5]定针缝速度 [5] Fixed stitch speed
P6	100~2000	1200	+ -	[6]慢速起缝速度 [6] Slow starting speed
P7	0~99	2	+ -	[7]慢速起缝针数 [7] Number of slow start stitches
P8	0~1	1	+ -	[8]停止后是否再次运行慢速起缝 [8] Whether to run slowly after stopping
P9	0~1	1	+ -	[9]中间缝结束后是否自动连接后回缝 [9] Whether to automatically connect the backlatching after finish the middle sewing
P10	0~3	0	+ -	[10]是否锁定起始针数 [10] Whether to Lock the Number of Initial Needles
P11	0~50	34	+ -	[11]前加固吸合倒缝电磁铁补偿时间 [11] Compensation time of backlatching electromagnet of front reinforcement suction
P12	0~50	22	+ -	[12]前加固关闭倒缝电磁铁补偿时间 [12] Compensation time of backlatching electromagnet of front reinforcement closed
P13	0~50	34	+ -	[13]后加固吸合倒缝电磁铁补偿时间 [13] Compensation time of backlatching electromagnet of back reinforcement suction
P14	0~50	22	+ -	[14]后加固关闭倒缝电磁铁补偿时间

				[14] Compensation time of backlathing eleactromagnet of front reinforcement closed
P15	0~50	34	+ -	[15]连续缝吸合倒缝电磁铁补偿时间 [15] Compensation time of backlathing eleactromagnet of continuous sewing suction
P16	0~50	22	+ -	[16]连续缝关闭倒缝电磁铁补偿时间 [16]Compensation time of backlathing eleactromagnet of continuous sewing closed
P17	1~250	5	+ -	[17]测试运行时间 [17] Test run time
P18	1~250	3	+ -	[18]测试停止时间 [18] Test stop time
P19	100~500	200	+ -	[19]最慢速度 [19] the lowest speed
P20	100~900	300	+ -	[20]切线运行速度 [20] cutting line run time
P21	0~2	0	+ -	[21]安全开关类型（机头翻倒保护开关） [21] Safety Switch Type (Head Overturn Protection Switch)
P22	0~990	0	+ -	[22]切线动作前延时时间 [22] Delay time before cutting line action
P23	0~990	100	+ -	[23]切线动作时间 [2] cutting line action time
P24	0~990	360	+ -	[24]松线动作前延时时间 [24] Delay time before thread releasing action
P25	0~990	10	+ -	[25]松线动作时间 [25] thread releasing action time
P26	0~980	10	+ -	[26]扫线延时时间 [26] Sweeping Delay Time
P27	0~990	40	+ -	[27]扫线动作时间 [27] Sweeping action Time
P28	0~990	50	+ -	[28]压脚动作前延时时间 [28] Delay time before foot pressing
P29	0~359	60	+ -	[29]上停针位置点 [29] upper needle stop position
P30	0~2	0	+ -	[30]自动测试 [30] Automatic Test



P31	0~1	1	+ -	[31]是否自动找上针位 [31] Whether to find the upper needle position automatically
P35	1000	1000	+ -	[35]版本号, 每个版本都会修改 [35] Version number, each version will be modified
P36	0~1	0	+ -	[36]强制慢速起缝 [36] Forced slow start sewing
P37	0~200	85	+ -	[37]下针位位置点 [29] down needle stop position
P38	30~999	100	+ -	[38]倒缝全功率运行时间 [38] Full Power Operation Time of backlatching
P39	20~99	25	+ -	[39]倒缝持续占空比 [39] Continuous duty cycle of backlatching
P40	0~1	1	+ -	[40]轻后踏结束 [40] Finish with a light back step
P46	0~2	0	+ -	[46]机头按键的功能 [46] Function of machine Head Key
P47	0~999	150	+ -	[47]剪刀全额出力 [47] Full output of scissors
P48	0~100	25	+ -	[48]剪刀持续占空比 [48] Continuous duty cycle of scissors
P49	0~999	5	+ -	[49]轻后踏最小时间 [49] Minimum time of light back step
P50	0~999	480	+ -	[50]模拟踏板最大值 [50] Simulated Pedal Maximum number
P51	0~999	125	+ -	[51]模拟踏板前踏值 [51] simulated pedal front step number
P52	0~999	65	+ -	[52]模拟踏板后踏值 [52] simulated pedal back step number
P53	0~999	20	+ -	[53]模拟踏板全后踏值 [53] simulated pedal full back step number
P54	0~1	1	+ -	[54]倒缝补针功能 [54] Reverse Sewing Needle add Function
P55	0~999	360	+ -	[55]剪刀进入距离停止点位置 [55] Scissors enter distance the stop point
P56	0~999	10	+ -	[56]剪刀放开距离停止点位置

				[56] Scissor release distance stop point position
P57	0~999	0	+ -	[57]夹线器全额出力时间 [57] Full Output Time of thread tension disk
P58	0~100	100	+ -	[58]夹线器维持占空比 [58] thread tension disk maintains duty cycle
P59	0~999	280	+ -	[59]夹线器进入位置 [59]thread tension disk insert position
P60	0~999	360	+ -	[60]夹线器长度 [60] thread tension disk length
P61	0~1	1	+ -	[61]夹线器是否开启标志 [61] Whether the thread tension disk is open or not
P62	0~1	1	+ -	[62]夹线器/扫线切换 [62] thread tension disk/sweep switch
P63	0~990	150	+ -	[63]压脚全功率时间 [63] Full Power Time of Pressure Foot
P64	10~90	25	+ -	[64]压脚动作占空比 [64]Duty cycle of foot pressing action
P65	0~100	10	+ -	[65]压脚续流关闭时间 [65] Closing time of foot-pressing follow-up
P66	0~999	100	+ -	[66]压脚结束处占空比时间 [66]Duty cycle time at the end of foot pressing
P67	0~100	30	+ -	[67]压脚关闭时占空比 [67]Duty cycle of press foot closure
P68	0~990	200	+ -	[68]压脚放下延时电机启动 [68] Put down the foot and start the delayed motor
P69	1~30	10	+ -	[69]抬压脚最大运行时间（超时后放下） [69] Maximum running time of lifting foot (put down after overtime)
P70	0~1	0	+ -	[70]是否关闭抬压脚功能 [70] Whether to close the function of lifting foot
P71	0~1	0	+ -	[71]轻后踏取消压脚功能 [71] Remove foot pressing function by light back step

P72	0~100	100	+ -	[72]抬压脚全额处占空比 [72] duty cycle of the whole forehead of the lifting foot
P74	0~1	0	+ -	[74]剪线后反转（厚料反转提针） [74] Reverse after shearing (Thick Material Reverse Punch)
P75	0~5000	200	+ -	[75]停止多少时间后反转（配合 P74 用） [75] How long does it stop and reverse (with P74)
P76	100~1000	200	+ -	[76]剪线后反转转速（配合 P74 用） [76] Reverse speed after shearing (for P74)
P77	0~180	30	+ -	[77]剪线后反转角度（配合 P74 用） [77] Reverse angle after shearing (with P74)
P99	0~2000	820	+ -	[99] （双刀）倒缝起始位 [99] (double knife) back sewing start position
P100	0~719	370	+ -	[100] （双刀）倒缝结束位置 [100] (double knife) back sewing finish position
P101	50~1000	450	+ -	[100] （双刀）时运行速度 [101] (double knife) running speed

## 2 错误代码表

Error code table

错误码 Error code	内容 content	对策 countermeasure
ER01	定位器信号异常 Locator signal abnormality	关闭系统电源，检查电机编码器借口是否松动或脱落，将其回复正常后重启系统。若仍不能正常工作，请更换电机并通知厂方。Turn off the power supply of the system, check whether the excuse of the motor encoder is loose or falling off, and restart the system after it returns to normal. If it is still not working properly, please replace the motor and notify the factory.

ER02	控速器接触异常 Speed Controller Contact Abnormality	将模块驱动出力与机头出力全部关闭请检查控速器是否有松动，接触不良或控速器有故障 Turn off the module drive output and the engine head output. Check if the speed controller is loose, not in good contact or if the speed controller is malfunctioning.
ER04	<p>a) 马达插头配线接触不良导致不转 b) 车头机构锁死或马达皮带异物卷入卡死。 c) 加工物过厚，马达扭力不足无法贯穿。 d) 模块驱动出力异常。</p> <p>a) motor plug wiring contact is not good leading to non-rotation b) The head mechanism is locked or foreign body of motor belt is involved and jammed. c) Processing material is too thick, motor torque is insufficient to penetrate. d) Abnormal output of module drive.</p>	<p>将模块驱动出力与车头出力全部关闭。等待电源重新开启/复位。 (请检查车头是否卡住或定位器。马达。模块驱动等信号是否异常)</p> <p>Turn off the module drive output and the head output. Wait for the power supply to be restarted/reset. Please check whether the machine head is stuck or check the signal of the positioner, motor and module driver is abnormal or not .</p>
ER05	<p>1) 电力模块错误代码 Error code of power module 2) 不正常过电流或过电压 Abnormal overcurrent or overvoltage</p>	将模块驱动出力与机头出力全部关闭等待电源重新开启/复位(请仔细检在电源板各项机能) Turn off the module drive output and the machine head output and wait for the power supply to be restarted/reset (please check the functions of the power board carefully)
ER07	前面操作盒于 CPU 传输通信异常 Anomalies of Front Operating Box in CPU Transmission Communication	将模块驱动出力与机头出力全部关闭请检查操作盒信号配线是否异常或故障。Turn off the module drive output and the machine head output. Please check whether the signal wiring of the operation box is abnormal or malfunction.
ER15	电机编码器错误 Motor encoder error	<p>关闭系统电源，检查电机编码器接口是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换电机并通知厂方。</p> <p>Turn off the power supply of the</p>

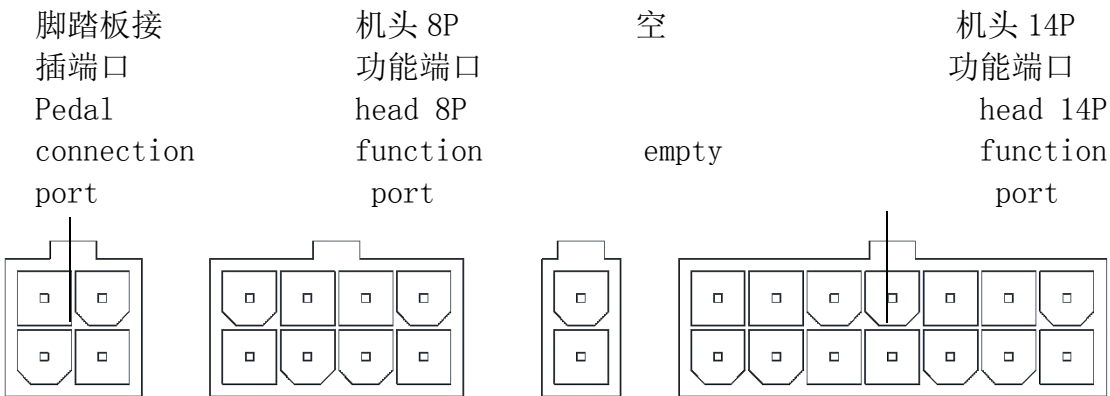
		system, check whether the motor encoder interface is loose or falling off, restart the system after restoring it to normal. If it is still not working properly, please replace the motor and notify the factory.
ER16	系统不运行时过压 Overvoltage of the system when it is not running	
ER20	系统欠压 Undervoltage of system	
ER31	电机原点检测错误 Motor origin detection error	
ER32	机头翻倒保护 Sewing Machine Head Overturn Protection	
ER33	倒缝超时保护 backlatching overtime protection	<p>倒缝电磁铁吸合时间过长，重启产品即可。</p> <p>若重启产品后还是报 ER33，请检查手动倒缝开关是否损坏。If the inverted electromagnet suction time is too long, the product can be restarted.</p> <p>If the product is restarted and still reported ER33, please check whether the manual backlatching switch is damaged or not.</p>
ER34	剪线堵转 Cutting blocking	
ER36	系统运行时过压 Overvoltage during system operation	
PWOF	交流式电断电 AC power cut	检查电源开关或者电源线是否接触不良或者断开 Check whether the power switch or power cord is in bad contact or disconnected

#### 4 端口示意图

4-port schematic

#### 4.1 各个端口名称

#### 4.1 Port Names



#### 4.2 14P 功能端口对应表

#### 4.2 14P Functional Port Correspondence Table

14	13	12	11	10	9	8
7	6	5	4	3	2	1

① 剪线电磁铁：1、8  
Shearing line electromagnets: 1, 8

② 夹线、拨线电磁铁：2、9  
Clamping and dialing electromagnets: 2, 9

③ 衣车灯：4（信号地）、11（+5V）  
LED lights: 4 (signal ground), 11 (+5V)

④ 手动倒缝开关：5（感应信号）、12（信号地）  
Manual backlatching switch: 5 (induction signal), 12 (signal ground)

⑤ 倒缝电磁铁：6、13  
Backlatching sewing electromagnets: 6, 13

⑥ 补针开关：7（感应信号）、14（信号地）  
Needle compensation switch: 7 (induction signal), 14 (signal ground)