

前言

Preface

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“吸风剪线”产品参考手册，请认真阅读此手册以更好的运用本公司产品！

The user manual is for our newly developed “Auto-Trimmer servo Motor with suck system ” products reference manual, Please read this manual carefully,hope it can give you useful help!

阅读本说明前以下要求说明请注意：

Before reading the manual,please note the following requirements:

- 1: 用户使用作业前必须可靠接地，保证人生安全！

The user must be grounded before operations to ensure safety

- 2: 非专业人士请勿拆卸控制箱

Non-professionals do not disassemble the control box

- 3: 控制箱与电机远离强磁高辐射环境

The control box and motor away from the magnetic high radiation environment

- 4: 不要在过热环境中作业

Do not work in hot environment

- 5: 不要在过于潮湿环境中作业

Do not work in humid environments

- 6: 220V 电控：【220V 接入供电时电压稳定在（210V~240V）之间】

220V electronic control: [220V access to power supply voltage stability between (210V~240V)]

110V 电控：【110V 接入供电时电压稳定在（100V~130V）之间】

110V electronic control: [110V access to power supply voltage stability between (100V~130V)]

安全叮嘱：

Safety requirement:

- 1: 电机接通时请不要把脚放在脚踏板上

Do not put your feet on the pedals when the motor is switched on

- 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, 拆卸维修时请关闭电源

During installation and removal service,please turn off the power

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。

保修策略:

Warranty policy:

1: 本产品自购买起免费保修 2 年, 终身维护。保修期内除人为损坏外出现的任何质量问题可免费修

Since from the purchase of this product,the free 2-year warranty,lifetime maintenance. During the warranty period,any quality problems the product will be free repaired,except artificial damage.

2: 未经本公司同意自行拆卸, 改装造成损坏将不给予保修

Without our consent disassemble or modify,the damaged will not give in warranty

3: 但凡出现无法解决的问题可以联系本公司

Whenever find the problem can not be solved,you can contact with our company

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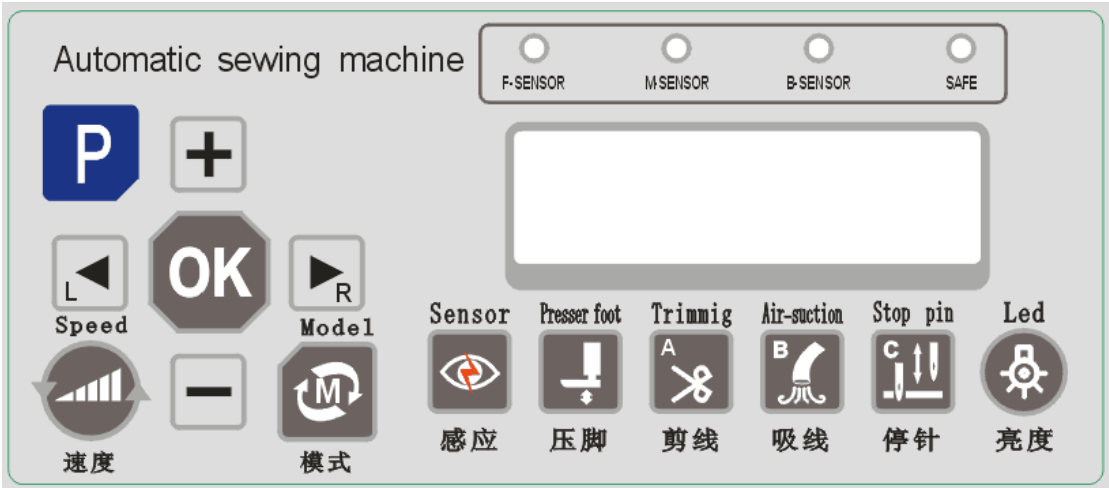
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1：显示屏常用操作介绍

Introduction of display screen common operation



序 号 NO	按键图标 Button Icons	功 能 说 明 Function Description
1	 (模式切换键) (Mode switch key)	点动  键：全自动→半自动→自由缝→全手工，之间切换 Jog  :Auto → Semiauto → Full manual ,Switching between
2	 (光眼功能键) (function button of light eye)	点动  键时进入光眼调整，重复点动切换： 光眼开启与关闭， Jog  into the light eye ON or OFF,Touch “OK” button to confirm Long press  , and press  ,then the light eye will be automatically adjust,  ,  ,  ,respectively for sewing thick material ,thick material,thin material adjust
3	 (压脚功能键) (Foot function key)	点动  键时进入压脚调整，重复点动切换： 前抬，后抬，前后抬，关闭， Jog  into the foot pressure adjustment, Long press  enter auto-lift foot

		repeated inching switch: before the lift, after the lift, lift off before and after, close	parameter adjustment (password required)
4	 (剪刀功能键) (Scissors function key)	点动  键时进入压脚调整, 重复点动切换: 前剪, 后剪, 前后剪, 关闭, Jog  into scissors adjustment, Repeat jog switch them; Front cutting, back cutting, Front and back together cutting, Stop cutting touch	长按  键进入剪线参数调整 Long press  enter scissors parameter adjustment
5	 (吸风功能键) (air suction function key)	点动  键时进入压脚调整, 重复点动切换: 前吸, 后吸, 前后吸, 关闭, Jog  into scissors adjustment. repeat jog switch front suction, back suction, front and back together suction, stop suction touch	长按  键进入吸风参数调整 Long press  enter the suction parameter adjustment
6	 (停针位调整键) (stop pin position adjustment key)	点动  键切换上下停针位 Jog  switch up or down needle position	长按  键进入针位参数调整 Long press  enter needle position parameter adjustment
7	 (速度调整键) (Speed adjustment key)	点动  键进入转速调整, 再通过  ,  键调整需要的转速, 转速自动保存。 Jog  into run speed adjustment, through  ,  change the speed, automatically saved	长按  键进入转速锁定 (需要密码) Long press  enter speed parameter lock (password required)
8	 (机头灯调整键) (head lamp adjustment key)	机头 LED 灯开关键 On off switch of head LED lights	
9	 (菜单键) (Menu key)	点动进入用户参数 Jog into user parameters	长按进入系统参数 (需要密码) Long press enter system parameters (password required)
10	 (确认键) (confirm button)	参数确定键 Parameter confirm key	

11	 (数值调整键) (Numerical adjustment key)	向上键 (修改数据时加) Up key (when need reduce data)	
12	 (数值调整键) (Numerical adjustment key)	向下键 (修改数据时减) To the left (enter the parameter, reduce)	
13	 (筛选键) (Filter key)	向左键 (在进入参数项时向左边调整目标参数) To the left (enter the parameter,adjustment)	
14	 (筛选键) (Filter key)	向右键 (在进入参数项时向右边调整目标参数) To the right (enter the parameter)	
15	状态指示灯 Status indicator	黄色: 前光眼信号指示。 Yellow:front light eye signal indication	《有布遮住时或光眼灵敏度低于 50 时亮起》 When the cloth covers or the light sensitivity is less than 50,the light from the light
		紫色: 中光眼信号指示。 Purple:optical eye signal indication	《有布遮住时或光眼灵敏度低于 50 时亮起》 When the cloth covers or the light sensitivity is less than 50,the light from the light
		绿色: 后光眼信号指示。 Green:back light eye sight indication	《有布遮住时或光眼灵敏度低于 50 时亮起》 When the cloth covers or the light sensitivity is less than 50,the light from the light
		红色: 安全开关指示。 Red:safety switch indicator	《断开时闪烁。正常合闭时灭》 Flashes when disconnected,light off when normal close
		蓝色: 显示屏电源指示。 Blue:display power indicator	《显示屏通电亮起》 Lights up when display has power
16	F-SENSOR	前光眼指示灯 Front light eye indicator	当前光眼无布料挡住时, F-SENSOR 灯亮时, 则检查光眼灵敏度, 保证灵敏度不能低于 55. When the light is on the light of the F-SENSOR lamp is light, and the sensitivity of the optical eye is checked,and the sensitivity can not be less than 55
17	M-SENSOR	中光眼指示灯 Medium light eye indicator	当中光眼无布料挡住时, M-SENSOR 灯亮时, 则检查光眼灵敏度, 保证灵敏度不能低于 55. In the middle of the eye without cloth blocking, M-SENSOR light, then check the optical eye sensitivity, to ensure that the sensitivity can not be less than 55
18	B-SENSOR	后光眼指示灯 Light eyes light	当后光眼无布料挡住时, B-SENSOR 灯亮时, 则检查光眼灵敏度, 保证灵敏度不能低于 55. In the back of the eye without cloth blocking ,

			B-SENSOR lights, check the light eye sensitivity, ensuring the sensitivity of not less than 55
19	SAFE	安全指示灯 green indicating lamp	

2：如何进入参数与如何修改参数

2:How to enter parameters and how to modify the parameters

系统参数进入解析：长按（）键持续 2 秒钟进入 “系统参数”列表（需要密码进入调整）。（）（）键将选取修改的是参数值还是菜单值，点动后选取的地方将会出现闪烁。（）（）键将增加或减少闪烁区的数值。

修改完毕参数后需要按（）键保存参数并退出系统参数。

注： 以上是进入方法，具体参数号代表的参数意思详情如下：

System parameter entering analysis:

Long press （） button for 2seconds to enter the “System Parameter” list (requires a password to enter the adjustment). （）（） key for select to modify a parameter value or menu value,After choice, the selected places will be flashing. （）（） key to increase or decrease the value of flashing place.

After completion of parameter changes need to press the （） key to save the parameters and exit the system parameters.

Note: the up entry method, specific parameters No.on behalf of the parameters meaning as follows:

3：操作参数说明表

3.Operating Parameter Description Table

技术员系统参数列表：

List of system parameters for technicians

序号 System parameter list	功能说明 Function description	功能参数默认值 Function parameter default values	功能参数范围 Function parameter ranges	参数说明 Parameter description
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S2	两传感器间针数 Number of stitches between the two sensor	20	1~50	设定两个光眼之间的针数 Set the number of stitches between the two photo-eye
S3	前剪线延时针数 Former cutting line delay number of stitches	4	0~50	后面光眼感应到后延迟剪线的针数 Back photo-eye sensor to
S4	双光眼后剪线延迟针数 Number of delayed stitches after double optical eye	12	0~50	后面光眼离开后延迟剪线的针数 After leaving latter photo-eye how many delay stitches begin to auto trimmer
	三光眼后剪线延迟针数 All eyes after the cut line delay pin number	0	0~50	
S5	前吸气开启针数 Stitches number beginning to suck	2	1~50	感应到第一个光眼后从第几针开始吸气 From which stitches beginning to suck after leaving former photo-eye
S6	前吸气关闭针数 Before closing's number of the needle	14	1~50	打开后，计数几针后关闭吸气 Account how many stitches begin to close former suction
S7	后吸气开启针数 Stitches number to open latter suction	2	1~50	离开后光眼后第几针开始吸气 After leaving latter photo-eye,how many stitches begin suck
S8	后吸气关闭延时 Inspiratory off delay	200	100~5000MS	离开光眼后，计数几毫秒后关闭吸气 After leaving latter photo-eyes,count how many milliseconds off suction
S12	停车延迟针数 Delay stitches after parking	2	1~99	剪完线后多少针自动停车 How much stitches auto parking after trimmer
S13	中吸气开启针数 Number of open air	50	1~250	离开前光眼多少针后吸气 How many needles to breathe before leaving the light eyes
S14	中吸气关闭针数 Number of suction and closing needles	20	1~100	吸气针数 Inspiratory pin count
S15	后剪光眼（三光眼）延迟针数 Cut light eye (three eyes) delay pin number	25	1~100	离开中光眼后经过多少针后没检测到第三光眼信号就开始剪线 Leave in the light eye after much after the needle cannot detect the third eye signal begins to cut the line
S16	前传感器响应时间 Former photo-eye response time	40	1~100MS	前面光眼感应到后响应的的时间 The response time when former photo-eye sense
S17	前传感器灵敏度 Former photo-eye response time	55%	20~175	为适应不同布料设定前光眼的透布强度 Setting photo-eye through the fabric strength,to adapt to different fabrics

S18	后传感器灵敏度 Latter photo-eye sensitivity	55%	20~175	为适应不同布料设定后光眼的透布强度 Setting photo-eye through the fabric strength,to adapt to different fabrics
S19	前抬压脚保留时间 Retention time for former presser foot	220	100~2000MS	抬压脚抬起后持续的时间(毫秒) Duration after lift foot
S20	后抬压脚启动时间 Latter presser foot start time	0	0~2000MS	脚踏板后踏压脚响应的时间（毫秒） The lift foot response time after latter foot pedal
S21	抬压脚保护时间 Presser foot protection time	6	1~120S	手动抬压脚持续多少时间后关闭（秒） How much time sustained after Manually lift presser foot
S22	放压脚保护时间 Presser foot protection time	20	20~800MS	放压脚时间（毫秒） The time down presser foot
S23	连续送布吸气剪线 Continuous feed suction cut line	0	0~1	0: 关闭 1: 开启 0:Close 1:Open
S24	运转中手动开关动作 In running manual switch action	1	0~1	0: 电机运转时按手动剪线不剪, 1: 可以剪 0:When the motor is running, tuch manual switch no cutting, 1:Have cutting
S25	安全开关选择 Safety switch selection	3	0~3	0: 关闭安全开关 1: 缝台安全开关 2: 压脚安全开关 3: 开启安全开关 0:off safety switch 1:Seam safety switch 2:Foot safety switch 3: open the safety switch
S26	切刀保留时间 Cutter retention time	35	1~1000MS	切刀动作时间（基本不用调整） Cutting action time (basically no adjustment)
S27	界面恢复时间 Recovery time	5	5~100S	控制面板在进入菜单后多少时间跳回主界面 After entering the control panel ,how much time to jump back to the main menu interface
S28	光眼模式（数量选择） Select photo-eye quantity	2	1~2	1 单光眼 2 双光眼 1:single photo-eye 2:double photo-eye
S29	前光眼极性选择 Former photo-eye polarity	0	0~1	下反射极性相反 Opposite polarity opposite
S30	后光眼极性选择 Latter photo eyes polarity	0	0~1	下反射极性相反 Opposite polarity opposite
S31	压脚全功率时间 Full power time of the foot	180	10~990MS	压脚全功率工作时的时间 Time of full power operation

S32	压脚全功率时功率 Full power time	100	20~100%	压脚开始动作时，瞬间的输出功率 When the foot starts to move, the instantaneous output power
S33	压脚保持功率 Holding power of the foot	25	10~90%	压脚抬起后维持住后的功率（不能超过50） Pressure foot lift after the maintenance of the power to live (not more than 50)
S34	后剪光眼灵敏度（剪刀边上） Posterior shear sensitivity (shear edge)	55	5~99%	
S35	后剪光眼开启（剪刀边上） After the shear light eyes open (scissors edge)	1	0~1	0: 关闭 1: 开启 0: closed 1: open
S37	语言选择 Language selection	0	0~2	0: 中文 1: 英文 2: 土耳其 0:Chinese 1:English 2:英文 2: Turkey
S38	最大速度锁定 Max speed lock	4800	250~6500	电机的最大可调速度限制 Maximum adjustable speed limit for motor
S39	参数复位 Parameter reset	0	0~1	调到 1 长按 OK 键有效 Transferred to 1 long-press the OK button to effective

工人系统参数列表（点动  键进入）

The workers system parameter list (point  enter)

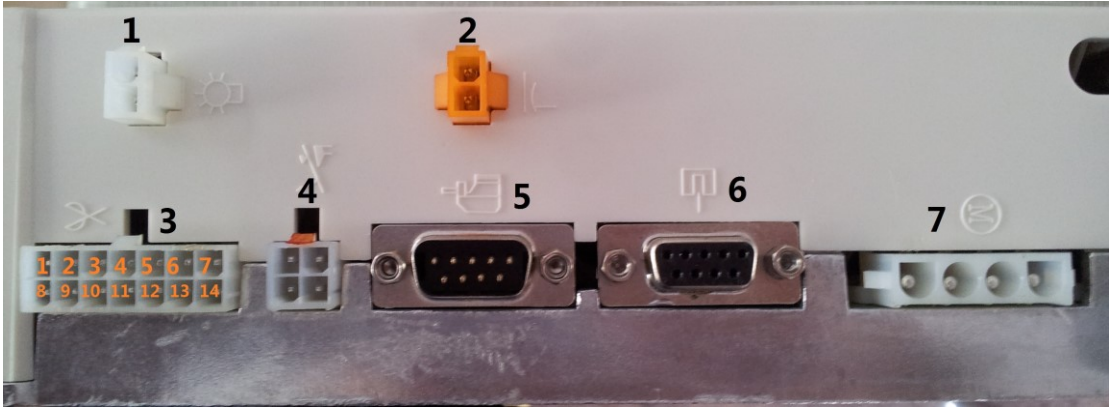
序号	功能说明	功能参数默认值	功能参数范围	参数说明
P-01	操作模式 operator schema	0	0~1	0: 半自动 1: 全自动 0: semi automatic 1: fully automatic
P-02	电眼开关 Electric eye switch	1	0~1	0: 关闭 1: 开启 0:Closed 1:Open
P-03	剪线 Shear line	3	0~3	0: 关闭 1: 前剪线 2: 后剪线 3: 前后剪线 0: close 1: before the cut line 2: after the cut line 3: before and after the shear line
P-04	吸气 Inhale	3	0~3	0: 关闭 1: 前吸气 2: 后吸气 3: 前后吸气 0: closed 1: before the inspiration 2: after the inspiration of 3: before and after the inspiration
P-05	后拖轮 After the tug	0	0~2	0: 关闭 1: 缝制中 2: 缝制后 0: close 1: sewing in 2: after sewing
P-06	压脚 Presser foot	3	0~3	0: 无抬压脚 1: 前抬压脚 2: 后抬压脚 3: 前后抬压脚 0: no lifting of the foot 1: front lifting foot

				2: after the lifting of the foot 3: before and after the lifting of the foot
P-07	启动速度模式 Start speed mode	1	0~1	0: 自动 1: 脚踏板 0: automatic 1: pedal
P-08	停车针位 Parking position	0	0~1	0: 上针位 1: 下针位 0: Upper pin position 1: a needle
P-09	停车自动抬压脚 Automatic lifting and pressing foot of parking	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-10	手动吸气 Manual suction	1	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-11	启缝速度 Opening speed	4500	200~5500	
P-12	最大速度 maximum speed ; top speed	4500	200~4800	
P-13	工作灯亮度 Working lamp brightness	4	0~5	
P-14	背光灯亮度 Back-light brightness	1	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-15	半自动连续缝制 Semi automatic continuous sewing	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-16	半自动恒速剪线 Semi automatic constant speed line	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-17	前放压脚 Front foot	0	0~1	0: 自动模式 1: 手工模式 0: automatic mode 1: manual mode
P-18	脚控剪线 Foot control line	0	0~2	0:关闭 1: 全手工 2: 自由缝半自动 0: closed 1: full manual 2: free stitch semi-automatic
P-19	中吸气 Air breathing	0	0~1	0:关闭 1: 开启 0: Closed 1: Open
P-20	半后踏抬压脚 Half back foot	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-21	剪线后抬压脚 Cut line after the lifting of the foot	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-22	关闭手动抬压脚 Close manual lifting foot	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-23	自由缝开启 Free seam opening	0	0~1	0: 关闭 1: 开启 0: Closed 1: Open
P-24	后剪线光眼延迟检测 Delayed detection of posterior shear line	1	0~1	0: 关闭 1: 开启 0: Closed 1: Open

P-25	空 empty			
P-26	自动跑合运行 Automatic running and running	0	0~1	0: 关闭 1: 开启 0:Closed 1:Open
P-27	自动跑合运行时间 Automatic running time	4	3~20	时间单位为: 秒 The time unit is: Second
P-28	自动跑合运行停止时间 Automatic running stop time	2	2~20	时间单位为: 秒 The time unit is: Second
P-29	电控版本号 Electronic version number			
P-30	显示屏版本号 Display version number			

4：控制箱端口说明

4:The control box port description



端口号码 Port Number	端口连接的器件名称 Port device name for the connection
1	5V 电源 LED 机头灯插孔，吸风剪线配套时端口无效 5V power LED lamp socket, suction wind shear line when the port is invalid
2	抬压脚控制端口，连接压脚电磁铁（30V） Raised foot control port, connected to the pin magnet (30V)
3	14P 多功能端口（详情见 14P 多功能端口定义篇幅） 14P multi function port (details see 14P multi functional port definition length)
4	调速器端口，连接调速器 Governor port, connecting speed regulator
5	连接吸风剪线显示控制面板端口 Connecting suction wind shear line display control panel port
6	连接电机相位信号线端口 Connected motor phase signal line port
7	连接电机 4 线驱动线端口 Connecting motor 4 wire drive line port

3 号 14P 多功能端口

No.3 14P Multifunction port

3 号多功能端口标号 The 3 rd multifunction port label	功 能 Function
3, 10	3: 压脚输出 Presser foot output 10: 30V
6, 13	6: 吸风输出 Suction wind output 13: 30V
7, 14	7: 剪刀输出 Scissors output 14: 30V

5: 故障代码解析

5:Error code analysis

故障代码 Fault code	故障描述 Fault description	故障产生原因 Causes of failure	故障的解决方法 Fault solution
ER-01	找不到停针位 Can not find the stop pin	1:手轮和电机靠的不够进 2: 手轮上磁钢脱落 3: 手轮磁铁极性装反 4: 九针端子头接触不良 5: 电机霍尔损坏 1: hand wheel and motor is not enough. 2: hand wheel steel shed 3: hand wheel magnet polarity 4: bad contact terminal nine. 5: motor Holzer damage	1: 检查电机信号线有无松动 2: 更换手轮 3: 更换电机 1: check whether the motor signal line is loose 2:replace the ? 3: replace the motor
ER-02	调速器信号错误 Governor signal error	1: 开机时没插调速器 2: 调速器插反 3: 调速器线断开 4: 调速器损坏 1: boot without governor 2: Governor plug back 3: the governor line is disconnected 4: Governor damage	1: 检查调速器信号线 2: 更换调速器 3: 更换控制器 1: check the governor signal line 2: change the governor 3: replace the controller
ER-03	电机相位信号错误 Motor phase signal error	1: 九针插头接触不良 2: 电机安装时霍尔和转子存在大偏差 3: 电机霍尔坏 1: bad contact plug nine. 2: there is a large deviation in the installation of the motor Holzer and the rotor 3: motor Holzer bad	1: 打开电机上的橡皮盖通过孔看电机 转子与定子是否在同一平面保障误差 不超过 1MM 2: 更换电机 3: 更换控制器 1: open the rubber cover on the motor through the hole to see whether the motor rotor and stator in the same

			plane to ensure the error is not more than 1MM 2:replace the motor 3: replace the controller
ER-04	电机堵转保护 Motor locked rotor protection	1: 缝纫机过重或堵死 2: 电机过载 3: 电机 4 线驱动线没连接好或插反 1: sewing machine is overweight or blocked 2: motor overload 3: motor 4 wire drive line is not connected or inserted back	1: 检查电机 4P 线 2: 检查缝纫机是否过重 3: 更换控制器 1: check motor 4P line 2: check whether the sewing machine is too heavy 3: replace the controller
ER-05	硬件过流保护 Hardware overcurrent protection	1: 缝纫机过重或堵死 2: 电机过载 3: 电机相位信号线没连接好 1: sewing machine is overweight or blocked 2: motor overload 3: motor phase signal line is not connected	
ER-07	串口通讯超时 Serial communication timeout	1: 显示屏连接主板线连接不良 2: 主板芯片损坏 1: display connection board line connection is bad 2: motherboard chip damage	1: 检查显示屏与控制器连接线 2: 检查控制器是否还可运行, 如不能运行就是控制器损坏 3: 检查机器旁是否有高频机器干扰 4: 更换显示屏 1:Check the connection line between the display screen and the controller. 2: check whether the controller can run, if not run is the controller damage 3: check whether there is a high frequency machine near the machine interference 4: change the display screen
ER-09	存储器不良 Poor memory	1:主板存储器损坏或不良 1: motherboard memory damage or poor	1: 控制器损坏 1: controller damage
ER-10	光眼控制线路故障 Optical eye control line fault	1:显示屏链接光眼线路不良 1: display screen linked to poor eye line	1: 显示屏损坏 2: 显示屏背部光眼连接线接触不良 1: display damage 2: the screen back light eye contact

6: 装箱单

6: Parking list

名称 Name	数量 Quantity
电机 Motor	1
转子 Rotor	1
电控箱 Electric control box	1
风叶 Fan blade	1
调速器 Seep controller	1
显示屏 Display	1
拉杆 Drawbar	1
剪刀光眼集成 Scissors light eye integrated	1
1: 气动（电磁阀，气缸）或 Pneumatic (solenoid valve, cylinder) 2: 电动（抬压脚电磁铁，剪刀电磁铁） Electric (lift press foot electromagnet, scissors electromagnet)	说明：这里视客户选的套件定！客户买回后包装盒 里是相应的套件 1 套 Note:the package set depends on customer selected,choose one in the two sets
吸风装置 Suction device	1
光眼套件（前光眼&中光眼&后光眼） photo eye kit (former light eye & Medium light eye & latter light eye)	1
螺丝包 Screw packet	1
定位套 Positioning sheathing	1
说明书 User manual	1