

单步进说明书 VER:2.0 版



安全指示

- 1) 在安装或使用本产品时，使用者必须彻底并仔细阅读本操作手册。
- 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。
- 3) 本产品须由受过正确训练的人员来安装或操作。
- 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。
- 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。
- 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。
- 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。
- 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。
- 9) 请注意电源线不要受压或过度扭曲。
- 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。
- 11) 所有可转动的部分，必须以所提供的零件加以防范露出。
- 12) 第一次通电后，先以低速操作缝纫机并检查转动方向是否正确。
- 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。
- 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。
- 15) 所有维修用的零件，须由本公司提供认可，方可使用。
- 16) 请不要以不适当物体来敲击或碰撞由本产品及各装置。

保修期限

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。

保修内容

本产品在正常情况且无人失误的操作下，与保修期间无偿为客户维修使能正常操作。

但以下情况于保修期间将收取维修费用：

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。
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。
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。

* 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)

Single stepmotor instruction VER2.0

Safety instructions

- 1) When installing or operating the product, the user must read up the instruction thoroughly and carefully.
- 2) All of the instructions marked with  should must be cared or executed, or it may lead to physical injury.
- 3) The product should be installed or operated by the operator who with the proper training.
- 4) It is forbidden to lengthen the electric wire to supply power to other electrical appliances.
- 5) Make sure the voltage is lower than AC250V when connect the controller to the power, and the voltage should in the range of the specified voltage marked on the nameplate.(voltage range AC175V-270V suits the national standards)

Attention: Do not connect the controller to the AC380V voltage when it is 220V, or it will be abnormal and the motor will can not run. Turn down the power and check the voltage of the power when connect to the wrong voltage. The fuse, capacitors and the power IC will be broken when continuous connected to the 380V for 5 minutes, and it will be dangerous for the operators.

- (6) Do not operate in the environment with direct sunlight, outside of the room and the temperature is higher than 45 °C or lower than 5°C.
- (7) Do not operate beside the heating, the environment with water and the humidity is higher than 95% or lower than 30%.
- (8) Do not operate in the environment with much dust, corrosive substance and volatile gas.
- (9) Protect the electric wire from over press and excessive contorted.
- (10) The ground wire should be connected with the proper wire to the system grounding of the construction site.
- (11) All the parts can rotate should be protected with the parts provided from exposed.
- (12) Operate the machine with low speed and check the direction of the rotation of motor when the controller is connected to the power first time.
- (13) Turn down the power when operate the following action:
 1. Connecting the ports to the controller or the motor.
 2. Threading the needle.
 3. Flipping over the machine.
 4. Repairing or adjusting any parts of the machine.
 5. Without working.
- (14) It should be operated by mechanical and electrical technician who with proper training to do some maintenance or warranty works.
- (15) The parts for maintenance should be provide or approved by the company.
- (16) Do not knock on the product or any device with Inappropriate objects.

Warranty period

The warranty period of the product is one year after sale or two years after leaving the factory.

Warranty content

The product in warranty period can be repaired for free when it is broken with normal operating without personal error.

The product will be charged for maintenance in the following circumstances:

- 1. Improper using including connect the product to the much higher power, used as other purpose, dismantle, repair, change the parts privately or used out of specification, take water, oil or other objects into the product.
- 2. Fire, earthquake, lightning, wind disaster, flood disaster, salt erosion, abnormal voltage or other natural disaster or inappropriate environment lead to the damage of the product.
- 3. Damage of falling off or transporting by customer after sales.

The product is produced and tested by best effort and tight control to make it in a high quality and stability standard, but it may still be affected or broken by the electromagnetism, static electricity or unsteadiness power, so the system grounding of the operating environment should be well done, and the safety devices such as leakage protector are suggested to install.

1 操作面板说明

1 operate display instructions

1.  系统参数设置键 1.一般模式下按【P】键进入用户参数模式。 2.按住【P】键开机进入技术员参数模式。  System parameter setting button 1. In general mode, press button “P” to enter the user parameter. 2. Press button”P” when turn on the controller to enter the technician parameter.	2.  加号键 1.A、B、C、D、 E、F、G、 H 的设定针数增加。 2 参数选择区内当参数递增键。 3 参数内容区内设定数值递增键。 4 直接按加号键将增加缝制速度。  Plus button 1. Increase needle count for A,B,C,D,E,F,G,H. 2. Used as the increment key of the parameter selection. 3. Used as the increment key of the parameter content. 4. To increase the sewing speed when press the button “+” in the main interface.
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3.  减号键 1.A、B、C、D、E、F、G、H 的设定针数减少。 2 参数选择区内当参数递减键。 3 参数内容区内设定数值递减键。 4 直接按加号键将减小缝制速度。  Minus button 5. Reduce the needle count for A,B,C,D,E,F,G,H. 6. Used as the decreasing key of the parameter selection. 7. Used as the decreasing key of the parameter content. 1. To reduce the sewing speed when press the button “+” in the main interface.	4.  停针位与松线器组合键 1.点按此键屏幕图标亮了  表示停车时在上停针位 2.点按此键屏幕图标亮了  表示停车时在下停针位 3.长按此键屏幕图标亮了  表示松线器开启。 4.长按此键屏幕图标消失  表示松线器关闭。  Stop position and thread loosen button 1. Press the button to light up the  icon, means upper needle stop position. 2. Press the button to light up the icon,  means lower needle stop position. 3. Long press the button to light on the icon, it means the function of thread loosen turn on. 4. Long press the button to hide the icon, it means the function of thread loosen shut down.
5.  自由缝与花样自由缝组合键 1.点按此键屏幕图标亮了  表示自由缝模式开启。 一旦踏板往前踏下就正常车缝,当踏板回到中立时,立即停止车缝,当踏板往后踏时,就自动完成切线/扫线动作。 2.长按此键屏幕图标  亮了表示花样自由缝开启 此时踏板往前踏下,将会依次缝制设置好的花样号。  Free sewing and pattern free sewing combination keys 1. Press the button to light on the  icon , it means the function of free seam is opened. The machine will normally work when pushing the pedal, stop when release the pedal, and done the action of thread cutting/thread sweeping. 2. Long press the button to light on the  icon, it means the function of pattern free seam is opened. The machine will sewing the patterns which is set in turn.	6.  多段缝与自动触发组合键 1. 点按此键屏幕图标  亮了表示多段缝开启。 2.长按此键屏幕图标  亮了表示自动触发开启。  Multi-segment sewing and automatic trigger combination keys. 1. Press the button to  light on the icon, it means the multi-segment turn on. 2. Long press the button to light on the  icon, it means the automatic trigger turn on.
7.  花样号及针距递增键 一般模式下按此键可直接对当前针距加大, 花样缝模式下可切换花样号。	8  上停针位, 送料原点针距同步快捷键 如需调整送料原点或送料同步时按可直接进入系统参数 P29 P98 P99 P100 项位置。

 Increasing of the pattern number and the Needle gauge. In general mode, press the button can increase the needle gauge directly, and it can change to other patterns when in the pattern sewing mode.	 Upper needle position, material feeding original needle gauge SYNC shortcut key Press the button to enter the parameters P09, P98, P99 and P100 when adjusting the material feeding origin or synchronizes.
 8. 花样号及针距递减键 一般模式下按此键可直接对当前针距减小，花样缝模式下可切换花样号  Decreasing of the pattern number and the Needle gauge. In general mode, press the button can decrease the needle gauge directly, and it can change to other patterns when in the pattern sewing mode.	10.  花样缝模式 一般模式下按将直接进入花样缝模式  Pattern sewing mode In general mode, press the button to enter the pattern sewing mode directly.

11.  确定与锁屏组合键 1.进入参数项及其内容值如经调整变更后，需按下键予以保存确认。注:参数保存直接按此键即可。 2.屏幕解锁或锁屏需长按此键。  Positive and Lock screen combination button 1. Press the positive button to save the parameter content which is adjusted. Attention: just press the button to save the parameter. 2. Long press the button to unlock or lock the screen.	12.  光标左移键 1. 进入内部参数时作用于光标左移  Left shift key of the cursor 1. Used as the left shift key when enter into the internal parameters.
13.  光标右移键 1. 进入内部参数时作用于光标右移  Right shift key of the cursor 1.Used as the right shift key when enter into the internal parameters.	14.  前加固与剪线功能组合键 1.点按此键一次执行起始回缝 B 段或执行起始回缝 AB 段 1 次 2.点按此键两次执行起始回缝(A、B)2 次 3.长按此键屏幕图标  亮了表示剪线功能开启。 4.长按此键屏幕图标  消失表示剪线功能关闭。  Front reinforce and trimmer function combination button 1. Press the button to execute the starting back sewing segment B or (A,B) for once. 2. Press the button for twice to execute starting back sewing segment (A,B) for twice. 3. Long press the button to light on the  icon , it means the trimmer function turn on.

	4. Long press the button to light down the  icon, it means the trimmer function shut down.
15.  后加固与自动抬压脚功能组合键 1.点按此键一次执行终止回缝 C 段或执行起始回缝(C、D 段)1 次 2.点按此键两次执行终止回缝(C、D)2 次 3.长按此键屏幕图标亮  了表示自动抬压脚功能开启。 4.长按此键屏幕图  标消失表示自动抬压脚功能关闭。  Back reinforce and automatic presser foot lift function combination button 1. Press the button to execute ending back sewing segment C or starting back sewing segment (C,D) for once. 2. Press the button to execute ending back sewing segment (C,D) for twice. 3. Long press the button to light on the  icon, it means the automatic presser foot lift function turn on. 4. Long press the button to light on the  icon, it means the automatic presser foot lift function shut down.	16.  剪线后自动抬压脚与停车后自动抬压脚功能组合键。 1.点按此键屏幕图标  亮了表示剪线后抬压脚功能开启。 2.点按此键屏幕图标  消失表示剪线后抬压脚功能关闭。 3.长按此键屏幕图标  亮了表示停车后自动抬压脚功能开启。 4.长按此键屏幕图标  消失表示停车后自动抬压脚功能关闭。  Automatic presser foot lift function after trimmer and stop running combination button 1. Press the button to light on the  icon, it means automatic presser foot lift function after trimmer turn on. 2. Press the button to light down the icon, it means automatic presser foot lift function after trimmer shut down. 3. Long press the button to light on the  icon, it means automatic presser foot lift function after stop running turn on. 4. Long press the button to light down the  icon, it means automatic presser foot lift function after stop running shut down.
17.  夹线器与慢速起缝功能组合键 1.点按此键屏幕图标  亮了表示夹线功能开启。 2.点按此键屏幕图标  消失了表示夹线功能关闭。 3.长按此键屏幕图标  亮了表示慢速起缝功能开启。 4.长按此键屏幕图标  亮了表示慢速起缝功能关闭。  Thread clamp and low start sewing function	18.  花样加固缝模式 1.点按此键屏幕图标  亮了表花样加固缝开启 2.花样加固缝功能开启与关闭只对自由缝与多段缝模式生效。  Pattern reinforce sewing mode 1. Press the button to light on the  icon, it means the pattern reinforce sewing turn on. 2. Turning on and off the function of the pattern reinforce sewing take effect only in free sewing mode

combination button		and multi-segment sewing mode.	
1. Press the button to light on the  icon, it means the thread clamp function turn on.			
2. Press the button to light down the  icon, it means the thread clamp function shut down.			
3. Long press the button to light on the  icon, it means the low start sewing function turn on.			
4. Long press the button to light down the  icon, it means the low start sewing function shut down.			
19.	 前后密缝	20.	 花样缝编辑
1.点按此键一次前密缝开启。		1. 点按此键进入花样缝编辑界面。	
2.点按此键两次后密缝开启。			
3.点按此键三次前后密缝开启。			
4.点按此键四次前后密缝关闭。			
	 Front and back tight sewing	 Press the button to enter the interface to edit the pattern sewing.	
1. Press the button once to turn on front tight sewing.			
2. Press the button twice to turn on the back tight sewing.			
3. Press the button for three times to turn on the front and back tight sewing.			
4. Press the button for four times to shut down the front and back tight sewing.			

2 液晶显示字体与实际字体对照表

Comparison table of the numbers showing on liquid crystal display and actual font

数字字体部分：

Digital font section

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

英文字体部分:

English Font section

英文字母	A	B	C	D	E	F	G	H	I	J
液晶显示	A	b	c	d	E	F	G	H	I	J
英文字母	K	L	M	N	O	P	Q	R	S	T
液晶显示	k	L	m	n	o	P	q	r	S	T
英文字母	U	V	W	X	Y	Z				
液晶显示	U	v	W	X	Y	Z				

3 系统参数表

Parameter comparison table

参数项 parameter	范围 range	初始值 Initial value	设定键 Setting button	说明 instruction
在正常模式下按[P] Press button “P” in normal mode				
P1	100~9999	3500	+ -	[1] 最高转速 Maximum speed
P2	100~8000	1800	+ -	[2] 前加固速度 Front reinforce speed
P3	100~8000	1800	+ -	[3] 后加固速度 Back reinforce speed
P4	100~8000	1800	+ -	[4] 连续缝速度 Continuous sewing speed
P5	100~8000	3500	+ -	[5] 定针缝速度

				Fixed sewing speed
P6	100~2000	1200	+ -	[6] 慢速起缝速度 Low starting speed
P7	0~99	2	+ -	[7] 慢速起缝针数 Low starting needle
P8	0~1	1	+ -	[8] 停止后是否再次运行慢速起缝 Running low starting again when finishing sewing
P9	0~1	1	+ -	[9] 中间缝结束后是否自动连接后回缝 Back sewing automatic when finishing middle sewing
P10	0~3	0	+ -	[10] 是否锁定起始针数 Lock the starting needle count
P11	0~50	34	+ -	[11] 前加固启动补偿时间调整 Adjusting of compensation time of the front reinforce starting
(P11)	0~100	60	+ -	[12] 送料步进与机针、针板正缝同步时间修正(步进生效) Forward sewing synchronization time adjusting of the material feeding stepmotor, needle and the needle plate(take effect with stepmotor)
P12	0~50	22	+ -	[13] 前加固关闭补偿时间调整 Adjusting of compensation time of the front reinforce shutting off
(P12)	0~100	60	+ -	[12] 送料步进与机针、针板倒缝同步时间修正(步进生效) Backward sewing synchronization time adjusting of the material feeding stepmotor, needle and the needle plate(take effect with stepmotor)
P13	0~50	34	+ -	[13] 后加固启动补偿时间调整 Adjusting of compensation time of the back reinforce starting
P14	0~50	22	+ -	[14] 后加固关闭补偿时间调整 Adjusting of compensation time of the back reinforce finishing
P15	0~50	34	+ -	[15] 连续缝启动补偿时间调整 Adjusting of compensation time of the continue sewing starting
P16	0~50	22	+ -	[16] 连续缝关闭补偿时间调整 Adjusting of compensation time of the

				continue sewing finishing
P17	1~250	5	+ -	[17] 测试运行时间 Test running time
P18	1~250	3	+ -	[18] 测试停止时间 Test stop time
P19	100~500	200	+ -	[19] 最慢速度 Slowest speed
P20	100~900	300	+ -	[20] 剪线速度 Trimmer speed
P21	0~2	0	+ -	[21] 安全开关(0 开 1 常开 2 关) Safety switch (0 open 1 always open 2 close)
P22	0~990	0	+ -	[22] 切线动作前延时时间 Front delay time of cutting action
P23	0~990	100	+ -	[23] 切线动作时间 Cutting action time
P24	0~990	360	+ -	[24] 松线动作前延时时间 Front delay time of thread loosening action
P25	0~990	10	+ -	[25] 松线动作时间 Thread loosening time
P26	0~980	10	+ -	[26] 拨线延时时间 Flick thread delay time
P27	0~990	40	+ -	[27] 拨线动作时间 Flick thread action time
P28	0~990	50	+ -	[28] 压脚动作前延时时间 Front delay time of presser foot action
P29	0~359	60	+ -	[29] 上停针位调整 Upper needle stop position adjusting
P30	0~2	0	+ -	[30] 自动测试(1 开 0 关) Automatic test(1 open 1 close)
P31	0~1	1	+ -	[31] 开机是否自动找上针位 Find the upper needle stop position automatic when turning on the machine
P32	100~9999	3500	+ -	[32] 机头最高速度 Machine maximum speed
P33	0~100	0	+ -	[33] 踏板上部分保留 Pedal upper part retained
P34	0~100	35	+ -	[34] 踏板下部分保留 Pedal lower part retained
P35	1000	1000	+ -	[35] 版本号, 每个版本都会修改 Version number, modified every version
P36	0~1	0	+ -	[36] 强制慢速起缝

				Coerce low starting
P37	0~200	85	+ -	[37] 下停针位调整 Down needle stop position adjusting
P38	30~999	100	+ -	[38] 倒缝力度调整 Backward sewing force adjusting
P39	20~99	25	+ -	[39] 倒缝持续时间 Backward sewing continue time
P40	0~1	1	+ -	[40] 轻后踏结束 Finish mild back step
P41	0~359	88	+ -	[41] 电机角度 Motor angle
P42	0~1	0	+ -	[42] 电机角度测试 Motor angle test
P43	0~1	0	+ -	[43] 电磁铁错误屏蔽 Electric magnet error shielding
P44	0~1	0	+ -	[44] 电压错误屏蔽 Voltage error shielding
P45	0~1	0	+ -	[45] EEP 错误屏蔽 EEP error shielding
P46	0~2	0	+ -	[46] 机头按键的功能 Function of machine button
P47	0~999	150	+ -	[47] 剪刀力度调整 Trimmer force adjusting
P48	0~100	25	+ -	[48] 剪刀持续时间 Trimmer continue time
P49	0~999	5	+ -	[49] 轻后踏最小时间 Mild back step minimum time
P50	0~999	480	+ -	[50] 模拟踏板最大值 Simulate pedal maximum value
P51	0~999	125	+ -	[51] 模拟踏板前踏值 Simulate pedal forward step value
P52	0~999	65	+ -	[52] 模拟踏板后踏值 Simulate pedal backward step value
P53	0~999	20	+ -	[53] 模拟踏板全后踏值 Simulate pedal whole backward step value
P54	0~1	1	+ -	[54] 倒缝补针功能调整 Backward sewing needle patching function adjusting
P55	0~999	360	+ -	[55]剪刀进入距离停止点位置
P56	0~999	10	+ -	[56]剪刀放开距离停止点位置
P57	0~999	0	+ -	[57] 夹线器出力时间调整

				Adjusting the output time of the thread clamp
P58	0~100	100	+ -	[58] 夹线器维持时间调整 Adjusting the maintain time of the thread clamp
P59	0~999	280	+ -	[59] 夹线器进入位置 Enter position of the thread clamp
P60	0~999	360	+ -	[60] 夹线器长度 Thread clamp length
P61	0~1	1	+ -	[61] 夹线器是否开启标志 Signs of thread clamp opened or not
P62	0~1	1	+ -	[62] 夹线器/拨线切换(前后切换)
P63	0~990	150	+ -	[63] 抬压脚全功率时间 Presser foot full power time
P64	10~90	25	+ -	[64] 抬压脚维持功率 Presser foot maintain power
P65	0~100	10	+ -	[65] 抬压脚续流关闭时间 Presser foot continuous current shutdown time
P66	0~999	100	+ -	[66] 抬压脚结束下放速度 Presser foot release speed
P67	0~100	30	+ -	[67] 抬压脚结束下放力道 Presser foot release power
P68	0~990	200	+ -	[68] 抬压脚放下延时主轴电机启动 Delay to start the spindle motor when release the presser foot
P69	1~30	10	+ -	[69] 压脚抬起时维持时间(超时而放下) Presser foot maintain time(release when overtime)
P70	0~1	0	+ -	[70] 是否关闭抬压脚功能(0 开~1 关) Shut down presser foot function
P71	0~1	0	+ -	[71] 轻后踏取消压脚功能(0 开~1 关) Step backward on the pedal to cancel the presser foot function
P72	0~100	100	+ -	[72] 抬压脚力道大小设定 Setting power of the presser foot
P73	0~100	20	+ -	[73] 抬压脚续流时间 Presser foot continuous current time
P74	0~1	0	+ -	[74] 剪线后反转(厚料反转提针)(0 关~1 开) Reverse after trimmer(thick material reverse and lift needle)(0 close 1 open)
P75	0~5000	200	+ -	[75] 停止多少时间后反转(配合 P74 用)

				Interval time between stop running and reserve(cooperate with P74)
P76	100~1000	200	+ -	[76] 剪线后反转转速(配合 P74 用) Reserve speed after trimmer(cooperate with P74)
P77	0~180	20	+ -	[77] 剪线后反转角度建议(20-45) Reserve angle after trimmer(suggest 20-45)
P78	1~9999	99	+ -	[78] 放电电阻功率(保留) Discharge resistance power(retain)
P79	360~9999	400	+ -	[79] 放电电压 Discharge voltage
P80	0~9999	2000	+ -	[80] 停止的距离 P Stopping distance P
P81	0~720	30	+ -	[81] 剪线进入位置(距离停止点) Trimmer enter position(distance to stop point)
P82	100~720	500	+ -	[82] 剪线出去位置(距离停止点) Trimmer out position(distance to stop point)
P83	0~9999	1000	+ -	[83] 正常转速的 p Normal speed p
P84	0~9999	50	+ -	[84] 正常转速的 i Normal speed i
P85	0~9999	1000	+ -	[85] 500 转以下正常位置的 p The normal position under 500 RPM
P86	0~9999	50	+ -	[86] 500 转以下正常位置的 i The normal position under 500 RPM
P87	1~9999	1500	+ -	[87] 2 针到剪线处的 P
P88	1~2000	100	+ -	[88] 2 针到剪线处的 i
P89	1~9999	1000	+ -	[89] 无剪线停止时的 p
P90	1~2000	10	+ -	[90] 无剪线停止时的 i
P91	1~9999	1500	+ -	[91] 剪线时停止时的 p
P92	1~2000	100	+ -	[92] 剪线时停止时的 i
P93	1~100	30	+ -	[93] 剪线时停止时的 i
P94	1~100	100	+ -	[94] 松线全额占空比
P95	1~999	150	+ -	[95] 松线全额时间
P96	1~100	96	+ -	[96] 剪刀占空比
P97	0~1	1	+ -	[97] 剪刀占空比
P98	0~1000	500	+ -	[98] 送料步进机械零点修正 Zero correction of material feeding stepper machine

P99	0~1000	250	+ -	[99] 送料步进正缝针距修正 Material feeding stepper forward sewing needle distance correction
P100	0~1000	250	+ -	[100] 送料步进倒缝针距修正 Material feeding stepper backward sewing needle distance correction
P101	0~50	18	+ -	[101] 前密缝针距设定 Front tight sewing needle distance setting
P102	0~30	1	+ -	[102] 前密缝针数设定 Front tight sewing needle count setting
P103	1~15	2	+ -	[103] 前密缝重复次数设定 Front tight sewing repeat number setting
P104	0~50	10	+ -	[104] 后密缝针距设定 Back tight sewing needle distance setting
P105	0~30	1	+ -	[105] 后密缝针数设定 Back tight sewing needle count setting
P106	1~15	2	+ -	[106] 后密缝重复次数设定 Back tight sewing repetition number setting
P107	0~999	400	+ -	[107] 前密缝开启后夹线器长度设定 Thread clamp length setting after turning on the front tight sewing
P108	100~3000	2500	+ -	[108] 前密缝独立速度 Front tight sewing independent speed
P109	100~3000	1500	+ -	[109] 手动倒缝最高转速 Manual backward sewing maximum speed
P110	100~4500	1500	+ -	[110] 花样缝速度 Patter sewing speed
P111	0~1	0	+ -	[111] 步进测试模式 Stepper test mode
P112	0~1	0	+ -	[112] 预留功能 Reserve function
P113	20~500	80	+ -	[113] 步进位置环 P
P114	20~500	80	+ -	[114] 步进速度环 P
P115	20~500	80	+ -	[115] 步进速度环 I
P116	0~10	2	+ -	[116] 高速补偿值 High speed compensation value
				[117]
				[118]
P119	0~1	1	+ -	[119] 步进持续大电流报警开关
P120	1500~3500	2300	+ -	[120] 步进高速 该值不能低于倒缝的最高性能值

P121	30~100	60	＋ －	[121] 步进高速摆速
P122	0~20	5	＋ －	[122] 步进后密最后一针补偿值
P123	100~1240	850	＋ －	[123] 步进锁相电流 1240=5A
P124	0~2	0	＋ －	[124] 前后加固速度针距自适应开关 0 关闭 1 开启 2 精准
P125	0~4096	1250	＋ －	[125] 负载报警设定值
P126	0~4096	0	＋ －	[126] 负载报警查看值
P127	0~100	0	＋ －	[127] 微抬占空比
P128	0~360	0	＋ －	[128] 微抬起始角度
P129	0~360	280	＋ －	[129] 微抬结束角度
P130	0~4096	0	＋ －	[130] 实时转速查看值
P131	0~300	120	＋ －	[131] 弱磁电流
P132	3500~9000	6000	＋ －	[132] 弱磁生效转速
P133	0~20	0	＋ －	[133] 脚踏实时报警触发值
P134	0~1	1	＋ －	[134] 低速测试方式
P135	0~1	1	＋ －	[135] 静止时倒缝控制方式
P136	0~200	100	＋ －	[136] 小于 1.0 针距倒缝补偿
P137	0~200	100	＋ －	[137] 小于 2.0 针距倒缝补偿
P138	0~200	100	＋ －	[138] 小于 3.0 针距倒缝补偿
P139	0~200	100	＋ －	[139] 小于 4.0 针距倒缝补偿
P140	0~200	100	＋ －	[140] 小于 5.0 针距倒缝补偿
P141	0~200	98	＋ －	[141] 小于 6.0 针距倒缝补偿
P142	0~200	95	＋ －	[142] 小于 7.0 针距倒缝补偿
P143	0~200	92	＋ －	[143] 小于 8.0 针距倒缝补偿
P144	0~1	0	＋ －	[144] 防鸟巢功能开关
P145	0~1000	30	＋ －	[145] 触发剪线信号时，延时等待时间
P146	0~1000	10	＋ －	[146] 勾线全功率时间
P147	0~100	85	＋ －	[147] 勾线全功率占空比
P148	0~1000	25	＋ －	[148] 勾线维持时间
P149	0~100	75	＋ －	[149] 勾线维持占空比
P150	0~1000	30	＋ －	[150] 勾线结束，挑线&吸风延时等待时间
P151	0~1000	100	＋ －	[151] 挑线全功率时间
P152	0~100	85	＋ －	[152] 挑线全功率占空比
P153	0~1000	100	＋ －	[153] 挑线维持时间
P154	0~100	75	＋ －	[154] 挑线维持占空比
P155	0~4999	200	＋ －	[155] 剪线后吸风全功率时间
P156	0~100	85	＋ －	[156] 剪线后吸风全功率占空比
P157	0~4999	200	＋ －	[157] 剪线后吸风维持时间
P158	0~100	75	＋ －	[158] 剪线后吸风维持占空比

P159	0~4999	200	+	-	[159] 抬压脚吸风全功率时间
P160	0~4999	50	+	-	[160] 抬压脚吸风维持时间
P161	0~3	2	+	-	[161] 抬放压脚是否吸风 0 全关 1 全开 2 抬开放关 3 放开抬关
P162	0~9999	0	+	-	[162] 剪线计数

错误代码表

Error code table

错误码 Error code	内容 content	对策 countermeasures
ER01	定位器信号异常 Locator abnormal	关闭系统电源，检查电机编码器接口是否松动或脱落，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, check if the motor encoder ports loosened or unconnected, make it back to normal and restart the system. Change the motor and contact with factory if it still can not work normally.
ER02	控速器接触异常 Abnormal connection of pedal	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 module driver output and nose power to check if the pedal is poor contact or broken.
ER04	a) 马达插头配线接触不良导致不转 b) 车头机构死锁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。 A) motor port poor contact leads the motor no working B) machine or motor belt stuck C) the material is too thick to be run through by the motor power	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) Turn off module driver output and nose power to restart the power. (check if the machine is stuck, or the locator, motor or module-driver signal abnormal).
ER05	1) 主轴电机电力模块错误代码 2) 主轴电机不正常过电流或过电压	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(请仔细检查电源

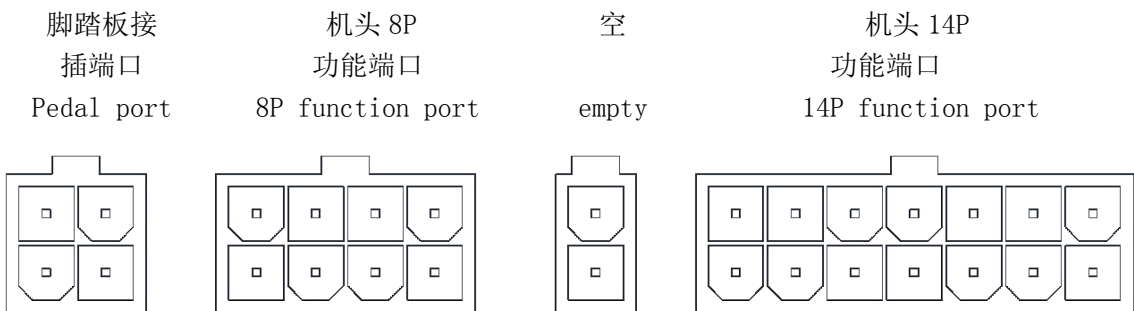
	1)Spindle motor power module error code 2)spindle motor abnormally overcurrent or overvoltage	板各项机能) Turn off module driver output and nose power to restart the power(check the function of the controller).
ER07	前面操作盒与 CPU 传输通信异常 The operate box and cpu transmission abnormal	将模块驱动出力与机头出力全部关闭请检查操作盒信号配线是否异常或故障。 Turn off module driver output and nose power to check if the controller box signal wire broken or not.
ER15	主轴电机编码器错误 Spindle motor encoder error	关闭系统电源，检查主轴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，请更换主轴电机并通知厂方。 Turn off the power to check if the spindle motor encoder port poor contact, make it back to normal and restart the system. Change the spindle motor and contact with factory if it still can not work normally.
ER16	系统不运行时过压 Overvoltage when the system do not work	
ER20	系统欠压 System under voltage	
ER31	主轴电机原点检测错误 Spindle motor origin detection error	
ER32	机头翻倒保护 Protection of machine turning over	
ER33	倒缝超时保护 Backward sewing overtime protection	倒缝电磁铁吸合时间过长，重启即可。 若重启产品后还是报 ER33，请检查手动倒缝开关是否损坏。 The suction closure time of backward sewing electromagnet is too long, just restart the product. Check if the manual backward sewing switch broken when it still show Error 33 after restart the product.
ER34	剪线堵转 Cutting thread locked rotor	转动手轮一圈使动刀回位, 清理异物检查剪刀组件无异常时可继续工作 Turn the hand wheel around to make the moving knife return back, clean the foreign matter and check the trimmer assemblies nothing out of ordinary,

		then continue the work
ER36	系统运行时过压 Overvoltage when the system is working	
ER81	步进电机原点检测错误 Stepmotor origin detection error	检查步进有无安装错误，松掉固定螺丝后，重启电源是否继续报警 Check if the stepmotor installing mistake or not, if it still shows error when releasing the fixed screw.
ER84	步进电机堵转 Stepmotor locked rotor	关闭系统电源，检查步进电机编码器接口是否松动或脱落，检查送料机械结构有无卡死或过载情况，将其恢复正常后重启系统。若仍不能正常工作，请更换步进电机并通知厂方 Turn off the power, check if the stepmotor encoder ports loosened or unconnected, check if the feeding mechanism stuck or overload, make it back to normal and restart the system. Change the stepmotor and contact with factory if it still can not work normally.
ER85	1. 步进电机电力模块错误代码 2. 步进电机不正常过电流或过电压 1. Stepmotor power module error code 2. Stepmotor abnormally overcurrent or overvoltage	检查步进电机插座有无松动，检查送料机械结构有无咬死，排除故障后电源重新开启/复位(请仔细检在电源板各项机能) Check if the stepmotor port loosened, if the feeding mechanism stuck, restart the power after trouble shooting(check the function of the controller).
ER87	步进电机与主轴电机端子插错 Wrong connect between the stepmotor and spindle motor	互调两个编码器插头，重新拔插，断电重启电控，若仍不能正常工作，请通知厂方 Change the ports of the two encoders and reconnect, restart the controller. Contact with factory if it still can not work normally.
ER88	步进电机到不了目标位置 Stepmotor can not reach the target position	检查送料机械结构有无卡死或过载情况，并检查连杆摆幅值有无超过限位，排除故障后电源重新开启/复位(请仔细检在电源板各项机能) Check if the feeding mechanism stuck or overload, check if the swing

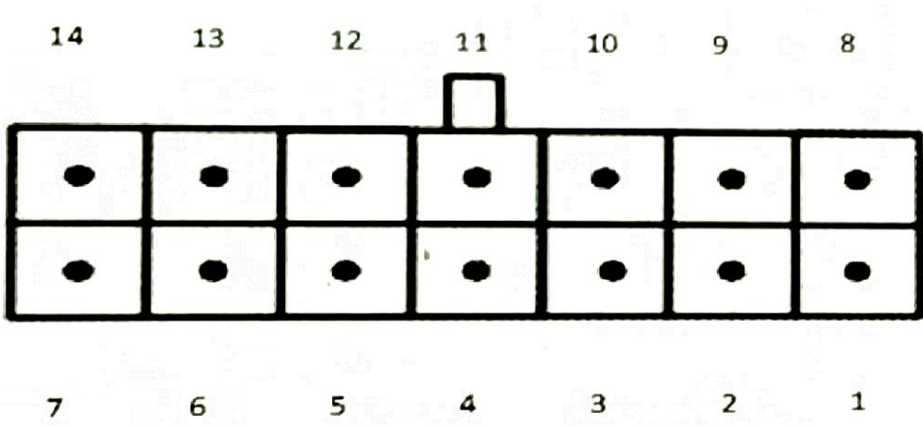
		oscillation of connecting rod exceeding limit, restart the power after trouble shooting(check the function of the controller).
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5 端口示意图 Ports sketch map

5.1 各个端口名称
5.1 each port name



5.2 14P 功能端口对应表
5.2 14P function port correspondence table



- ① 剪线电磁铁：1、8
Trimmer electromagnet:1,8
- ② 夹线、拨线电磁铁：2、9
Clamp thread and flick thread electromagnet:2,9
- ③ 衣车灯：4(信号地)、11(+5V)
Clothes machine light:4(ground signal),11(+5V)
- ④ 手动倒缝开关：5(感应信号)、12(信号地)

manual backward sewing switch: 5(inductive signal),12(ground signal)

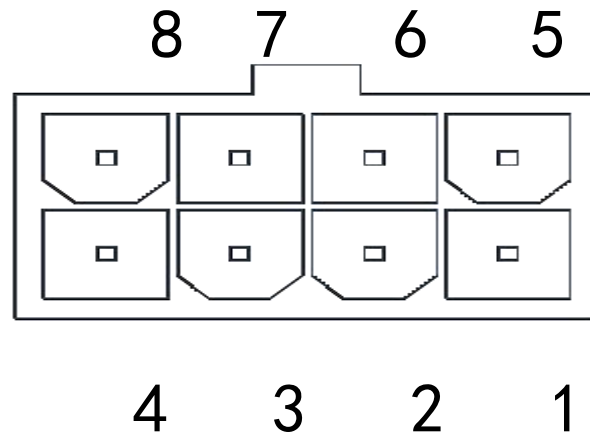
⑤ 倒缝电磁铁: 6、13

Backward sewing electromagnet:6,13

⑥ 补针开关: 7(感应信号)、14(信号地)

Needle patching switch:7(inductive signal),14(ground signal)

⑦ 电子松线器: 3、10



① 抬压脚: 4(32V 电源)、8(抬压脚)

Presser foot:4(32V power),8(presser foot)

② 抬压脚感应(原点检测): 3(感应线)、7(地线)、5(5V 电源线)

Presser foot induction(origin detection):3(detection wire),7(ground signal),5(5V power wire)

③ 油位感应: 2(感应线)、6(地线)、1(5V 电源线)

Oil level induction:2(induction wire),6(ground wire),1(5V power wire)