H7 电控使用说明书

H7 electric control box manual

安全事项

- 在使用本产品之前，请先阅读《产品说明书》及所搭配的缝纫机机械说明书。
- 本产品必须由接受过专业培训的人员来安装或操作。
- 请尽量远离电弧焊接设备，以免产生的电磁波干扰本控制器而发生误动作。
- 请不要在室温 45°以上或者 0°以下的场所使用。
- 请不要在湿度 30%以下或者 95%以上或者有露水和酸雾的场所使用。
- 安装控制箱及其他部件时，请先关闭电源并拔掉电源插头。
- 为防止干扰或漏电事故，请做好接地工程，电源线的接地线必须牢固的与大地有效连接。
- 所有维修用的零部件，须由本公司提供或认可，方可使用。
- 在进行任何保养维修动作前，必须关闭电源并拔掉电源插头。控制箱里有高压危险，必须关闭电源五分钟后方可打开控制箱。

- Safety Precautions
- Before using this product, please read the User's Guide and the manual of the machine attached with it.
- This product must be installed or operated by professionally trained personnel.
- Please keep away from the arc welding equipment to avoid the electromagnetic wave from interfering with the controller.
- Please do not use it at room temperature above 45° or below 0°。
- Please do not use it in places with humidity below 30% or above 95% or where there is dew and acid mist.
- When installing the control box and other parts, turn off the power and unplug the power plug.
- To prevent interference or electric leakage accidents, make a good grounding work. The grounding wire of the power cord must be firmly connected to the earth.
- All parts for maintenance must be supplied or approved by the Company before they can be used.
- The power must be turned off and the plug unplugged before any maintenance action is performed.There is a high-voltage danger in the control box. You must shut down the power for 5 minutes before opening the control box.

1 产品安装 Product Installation

1.1 产品规格 Product specification

电源电压 supply voltage	AC 220±20% V
电源频率 supply frequency	50Hz/60Hz
最大输出功率 Maximum power output	750W

1.2 接口插头的连接 The connection of interface plug

将脚踏板及机头的各连接插头安插到控制器后面对应的插座上，各插座名称如图 1-2-2 所示。连接好，请检查插头是否插牢。

Insert the connecting plugs of the foot pedal and the head of the machine into the corresponding socket at the back of the controller. Each socket names are shown in figure 1-2-2.Please check whether the plug is inserted.

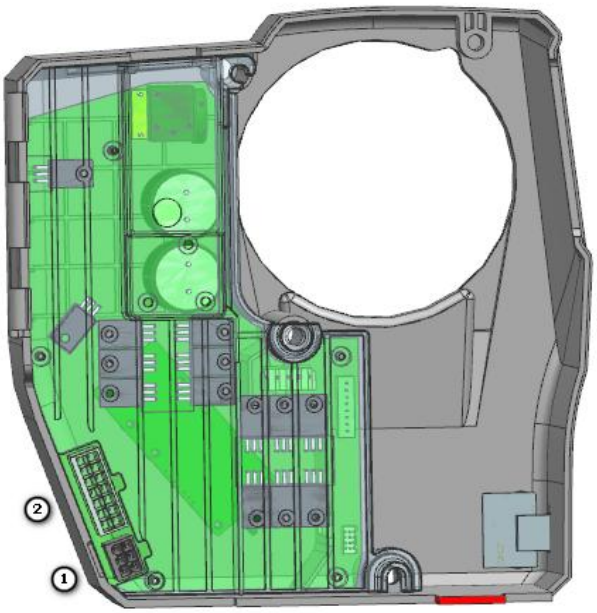
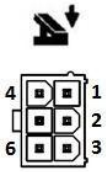


图 1-2-1 控制器图

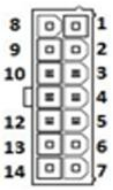
Figure 1-2-1 controller diagram

① 脚踏板&升级插座 Socket of foot pedal and updating;

② 电磁铁、LED 灯、机头按键插座 Socket of Electromagnet, LED Lamp and machine head



脚踏板&升级接口		
1	GND	5V数字地
2	XK	助力膝靠模拟信号
3	VCC	+5V
4	RX	UART通信接收
5	TX	UART通信发送
6	Pedal	脚踏板模拟信号



机头信号		
1	VDD	+30V
2	VDD	+30V
3	L5V	机头灯的电源
4	DGND	5V的地
5	VDD	+30V
6	VDD	+30V
7	VDD	+30V
8	JX	剪线电磁铁
9	SX	松线电磁铁
10	ZJ	1/2针距开关
11	BZ	手动补针开关
12	DF	手动倒缝开关
13	HTL	后拖轮
14	QX	夹线电磁铁

图 1-2-2 控制器接口定义（controller connection plug definition）

注：使用正常力量插不进去时，请检查插头与插座是否匹配，插入方向或针的方向是否正确！

Note: when you can't plug in with normal force, please check if the plug and socket match, the direction of insertion or needle is correct!

1.3 接线与接地 The grounding and connect

必须要做好系统的接地工程，请合格的电气工程人员予以施工。产品通电及投入使用前，必须确保电源插座 AC 输入端已安全可靠的接地。系统的接地线为黄绿线，该地线请务必可靠连接至电网安全保护接地上，以保证安全使用，并可防止出现异常情况。

注：所有电源线、信号线、接地线等接线时不要被其它物体压到或过度扭曲，以确保使用安全。

The grounding of the system must be completed, and qualified electrical engineers shall be required to construct. Before the product is energized and put into use, it is necessary to ensure that the AC input already connected the grounding. The standard grounding line is the yellow and green line. The ground wire must be reliably connected to the grid safely to protect grounding and ensure safely using and to prevent abnormal conditions.

Note: All power wires, signal wires, ground wires and other wiring should not be pressed or distorted by other objects to ensure safety.

2 操作面板使用说明 Operation panel introductions

2.1 操作面板的显示说明 display introduction

根据系统工作状态，操作面板的液晶屏将显示当前的缝纫状态 (包含停针位指示)。操作面板外观如下所示。

According to the working status of the system, the LCD of the operation panel will display the current sewing status (including the needle position indicate).The appearance of the operation panel is shown as below.

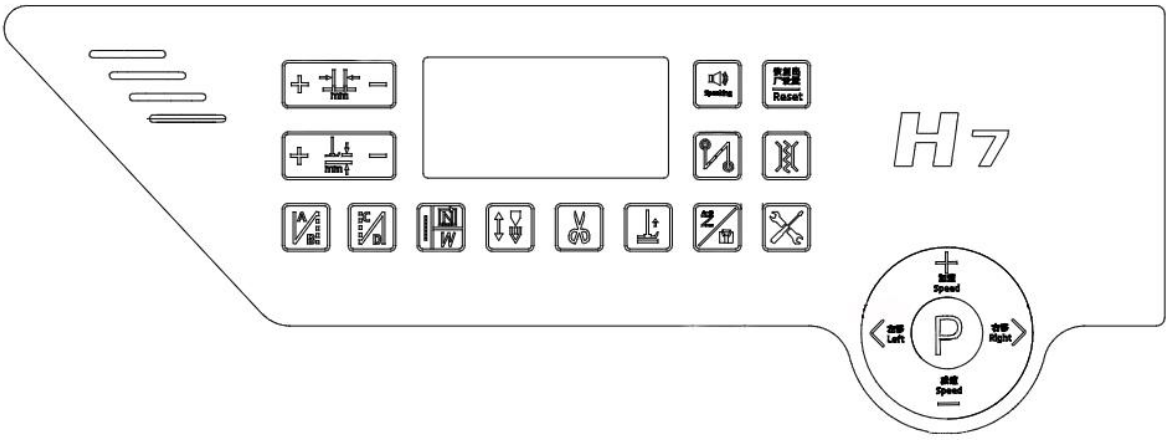
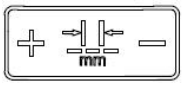
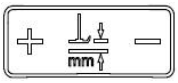


图 2-1 操作面板外观界面

Figure 2-1 appearance of operation panel

2.2 操作面板各按键功能说明 function declaration of each key

序号 No	外观 icon	名 称 Description	功能描述 Remark
1		针距调节键 Stitch length adjustment key	针距调整按键，空闲状态时短按加减针距 Stitch length adjustment key, press to increase or decrease stitch length in idle state
2		中途压脚高度调节键 Midway presser foot height adjustment key	压脚高度调整按键，空闲状态时短按加减压脚高度 Presser Foot Height Adjustment Button，press to increase or decrease Foot Height in idle state
2		前加固键 Start tacking	前固缝选择键，每短按动一次，在设置前固缝、前双固缝、关闭之间循环选择，对应液晶屏图标点亮。选择对应的键可设置 A、B 段的针数。 The start tacking key is selected for each short press, the cyclical selection is between the front tacking, the front double tacking and the closing, and the corresponding LCD screen is lit. Select the corresponding key to set the number of needles of A and B.
4		后加固键 Back tacking	后固缝选择键，每短按动一次，在设置后固缝、后双固缝、关闭之间循环选择，对应液晶屏图标点亮。选择对应的键可设置 C、D 段的针数。 The back tacking key is selected for each short press, the cyclical selection is between the front tacking, the front double tacking and the closing, and the corresponding LCD screen is lit. Select the corresponding key to set the number of needles of C and D.
5		夹线键 Thread clamp	按此键，液晶屏夹线图标亮，夹线功能开启，再按一次，夹线功能关闭； Press this key for short time,ico become lit, so thread clamp is working now, press again, the turn this function
6		抬压脚键 Press foot lift key	短按此键，用于循环切换抬压脚功能选择顺序为抬压脚开->中途抬压脚开->剪线后抬压脚开->中途抬压脚关->剪线后抬压脚关->抬压脚关； press this key for short time, Cycle through the presser foot lifting function options in the following order: Presser Foot Up -> Mid-sewing Presser Foot Up -> Post-cutting Presser Foot Up -> Mid-sewing Presser Foot Off -> Post-cutting Presser Foot Off -> Presser Foot Down. 长按此键，用于开启或关闭抬压脚功能 Press this key for long time, choose or cancel this function
7		剪线键 trimmer	按此键，用于开关自动剪线功能 Press for short time, icon become lit, trimmer function turn on, press again, trimmer function turn off.

8		模式切换键 Mode Switch Key	按此键，用于切换缝纫机工作模式，顺序为自由缝->W 缝->多段缝 Press this button to switch the sewing machine's operating mode in the following order: Free Sewing -> W Sewing -> Multi-segment Sewing.
9		上下停针位键 needle position Section key	按此键切换上/下停针位 Press short time to enter needle position function
10		花样缝键/计件界面键 Pattern Stitch Key/ Piecework Interface Key	短按此键进入花样缝模式，花样缝模式中短按此键，切换花样缝界面和花样缝设置界面 Short press this key to enter pattern stitch mode. In this mode, short press again to toggle between pattern stitch interface and settings 长按此按键进入/退出计件模式 Long press this key to enter/exit piecework mode
11		锁针键 Lockstitch Key	按此键，锁针功能依次切换为前锁针->后锁针->前后锁针->关闭; Press short time to this key, the lock stitch function will switch to front lock, rear lock, front and back lock, close;
12		进入参数区功能键 Parameter mode	参数功能进入键 Enter the parameter function
13		参数加键 (速度加) Up key(speed up)	在进入参数功能参数号/值加，初始待机下速度加 Enter this mode, adjust this key, increase speed
14		参数减键 (速度减) Down key(speed down)	在进入参数功能参数号/值加，初始待机下速度减 Enter this mode, adjust this key, decrease speed
15		左移键 Key left	参数设定中，向左选择参数范围 Turn to left to choose parameter
16		右移键 Right selection	参数设定中，向右选择参数范围 Turn to right to choose parameter
17		恢复出厂设置 Reset key	长按 3S 后恢复出厂设置 Press 3 seconds, then back to factory setting
18		语音键 Start speech key/voice key	短按循环开启关闭语音功能及开机语，依次切换为语音功能开->开机语开->开机语关->语音功能关 Short press to cycle through voice function and startup message on/off: Voice function on -> Startup message on -> Startup message off -> Voice function off. 报错时短按此按键播报语音导航 Short press this key to announce voice guidance when an error occurs.

19		维修模式键 Service Mode Key	短按此键切换急停状态 Short press this key to toggle the emergency stop status.

3 参数调节 Parameter adjustment

3.1 进入操作员参数模式及保存 Enter parameter mode and saving

空闲模式下，长按Ⓟ键进入操作员参数模式。按左移 Left或右移 Right 移动光标，相应位数值闪烁，再按 加速 Speed或 减速 Speed修改该位数值，按Ⓟ键，保存参数。如果参数未修改，按 Ⓟ键退出参数模式；如果参数已经修改，第一次按键保存参数，第二次按 Ⓟ 键退出参数模式。

Press Ⓟ, enter parameter mode, then press 左移 Left or 右移 Right to move the lit, corresponding number flashing, then press 加速 Speed or 减速 Speed to modify this value, press Ⓟ, save the parameter. If not modified, press Ⓟ to log out parameter mode, if already modify, firstly save parameter, then press Ⓟ to log out parameter mode.

3.2 进入技术员参数模式及保存 Enter technician parameter mode and save it

按住 Ⓟ 键开机进入技术员参数模式，参数调节方式同操作员参数调节方式。

Press Ⓟ and turn on the machine to enter technician parameter mode. The methods is same as parameter mode.

3.3 速度调节 Speed adjustment

在空闲模式下，按上键 加速 Speed下键 减速 Speed 调速度。向上调快，向下调慢，每按一次调整数值 50，可以长按连续加减。

Press 加速 Speed and 减速 Speed to adjust the speed. For up, to adjust fast, for down, to adjust slow.each adjustment value is 50.

3.4 恢复出厂设置 Factory setting

长按恢复出厂设置 Reset恢复出厂设置，作为恢复出厂设置的快捷方式。

Press the 恢复出厂设置 Reset for a long time, back to the factory setting.

3.5 进入监控模式 Enter monitoring system

在空闲模式下，按 Ⓟ +  键进入，按上下键调整监控参数项，按 P 键退出。（若为

24、25、26、28 项，长按 P 键保存当前监控值为对应参数，若保存成功，显示 OK，短按 P 键退出监控模式)

Press Ⓟ+ to enter this mode, press up and down key to adjust this parameter, press P, then can log out.(if it is24、25、26、28, then press P to save this monitoring value as the corresponding parameter, if save successfully, show OK, press P for short time to log out this mode.)

注：上停针位置设置：进入监控参数项 24，将手轮调整至上停针（参数会随着手轮位置而变化），长按 Ⓟ 键保存参数（保存后，下针位会自动进行相应调整），按 Ⓟ 退出监控模式。

PS: Needle position setting, enter monitoring mode number 24, move the hand wheel to up needle position(the value will be changed with hand wheel position), press Ⓟ for long time to save it(after save it, down needle position will be adjust automatically), press Ⓟ to log out this mode.

3.6 语言种类切换 Language type switch

长按语音按键 

，通过按 

或 

键切换参数号。切换参数时提示对应语言“语音功能开”，界面参数和语言名称如下表所示：

Long press the voice button 

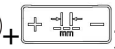
，Press 

+ 

to switch parameter number。When switching parameters, the corresponding language prompt is "Voice function on," and the interface parameters and language names are as shown in the table below：

0	1	2	3	4	5
中文 Chinese	英语 English	俄罗斯语 Russian	孟加拉语 Bengali	越南语 Vietnamese	波兰语 Polish

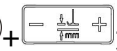
3.7 进入针距补偿比例调节模式 Stitch compensation ratio adjustment mode

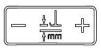
在空闲模式下，长按Ⓟ+进入参数修改界面。在参数修改界面短按〈或〉键切换修改的参数位，按⊕或⊖键修改针距补偿参数大小，修改后短按Ⓟ键保存针距补偿比例，面板

显示 ok 表示参数设置成功，短按Ⓟ键退出当前界面。

In idle mode, long press Ⓟ +  to Parameter Modification Interface。In the parameter modification interface, briefly press Ⓛ or Ⓡ key to switch the parameter position being modified, press ⊕ or ⊖ key to adjust the stitch compensation parameter size, after modification, briefly press Ⓟ key to save the stitch compensation ratio, the panel displaying ok indicates successful parameter setting, briefly press Ⓟ key to exit the current interface

3.8 进入快速调节压脚高度模式 Quick presser foot height adjustment mode

在空闲模式下，长按Ⓟ+进入 P174 参数修改界面。在参数修改界面短按Ⓛ或Ⓡ键切换修改的参数位，按⊕或⊖键修参数大小，修改后短按Ⓟ键保存参数值，面板显示 ok 表示参数设置成功，短按Ⓟ键退出当前界面。

In idle mode, long press Ⓟ +  to enter P174 parameter modification interface. Briefly press Ⓛ or Ⓡ to switch parameter positions, press ⊕ or ⊖ to adjust parameters, briefly press Ⓟ to save changes (panel shows "ok" for success), and press Ⓟ to exit.

3.9 参数表 Parameters list

3.9.1 操作员参数(长按 P 键进入) technician mode parameter (long press P key to enter)

参数项 Parameter List	参数描述 Description	默认值 Default Value	参数 范围 Parameter range	说明 illustrate
P00	最低缝纫速度(r/min) start sewing speed	200	100-800	
P01	自由缝限速(r/min) Max speed of free sewing	2200	200-2800	
P02	多段缝限速(r/min) Multi-segment sewing speed	2000	200-2200	

P03	上下停针位选择 Needle position	1	0-1	0：上停针位 up 1：下停针位 down
P04	前加固速度(r/min) Start tacking speed	1200	200-1800	
P05	后加固速度(r/min) Back tacking speed	1200	200-1800	
P06	W 缝速度(r/min) W sewing	1200	200-2200	
P07	慢速起缝速度(r/min) Soft start sewing speed	400	100-2000	
P08	慢速起缝针数 Soft start sewing stitch	2	1-9	
P09	慢速起缝开关 Soft start sewing switch	1	0-1	0：关闭 off 1：开启 on
P14	补针速度(r/min) Half stitch speed	200	100-500	
P15	按键补针模式 mode of half stitch	0	0-2	0：按时间补针 Half stitch according to time to 1：补半针 half stitch 2：补一针 one stitch
P17	主轴电机保持力 Spindle Motor Holding Force	0	0-20	0:关闭 off； 1-20：保持功能开 on； 保持电流=数值*0.1A Hold current = value * 0.1A
P21	手动倒缝主轴限速 max speed of manual reverse sewing	2200	200-2500	
P23	踏板控速曲线模式 curve mode of pedal	0	0-3	0：直线 straight 1：两段斜率 Slope 2：幂次曲线（平方、开方） curve（平方 square、开方 extraction of a root） 3：S 曲线 S curve
P24	踏板剪线位置 Pedal position of trimming	150	0-4095	抬压脚开 press foot lifte
P27	步进电机找电角度位置 Step Motor Electrical Angle Positioning	120	0-9999	
P29	踏板控速幂次曲线 Power Control Curve Auxiliary Parameters	1	0-1	0：平方 square 1：开方，模式开启，详见 P23extract a root Mode is enabled, see P2 for details
P30	过厚时电机加力模式 switch for supplying power with low speed	0	0-2	0：正常 normal 1：电机加力 motor supplies more power 2：电机加力+反拉控制 powerful motor + backwards to control
P31	剪线时电机力度 Trimmingr strength coefficient	30	10-60	
P32	夹线电磁铁全出力时间 thread clamp magnet work time	40	1-200	
P33	夹线电磁铁力度 Clamping Electromagnet Force	30	1-100	数值越大力度越大 Greater value results in greater force
P34	多段缝自动触发开关 Multi-segment sewing motion mode selection.	0	0-1	0：触发关，受踏板控制，可任意停止与启动； one key start function off 1：触发开，轻触踏板，自动执行一段动作； one key start function open
P35	夹线开关 Thread clamp switch	1	0-1	0：关闭 off 1：开启 on
P38	剪线开关	1	0-1	0：关闭 off 1：开启 on

	trimmer switch			
P39	中途抬压脚开关 press foot lifter in halfway	0	0-1	0：关闭 off　　1：开启 on
P40	剪线后抬压脚开关 switch of auto press foot lifter after trimming	0	0-1	0：关闭 off　　1：开启 on
P41	计针数计数单位 unit of counter	1	1-9999	
P42	计针数总数设定 setting of total counter	9999	1-9999	
P43	计针数模式选择 counter mode	0	0-6	0：关闭 off 1：升序循环计数模式 Ascending cycle count 2：降序循环计数模式 Descending cycle count 3：升序计满报错模式 Ascending accounting to full, alarm and stop running 4：降序计满报错模式 Descending accounting to 0, alarm and stop running 5：升序计满报错提示继续运行模式 Ascending accounting to full, remind and keep running 6：降序计满报错提示继续运行模式 Descending accounting to 0, alarm and keep running

3.9.2 技术员参数表（按住 P 键再开机进入）Technician Parameter list (Press P and switch on to enter)

参数项 Parameter List	参数描述 Description	默认值 Default Value	参数范围 Parameter range	说明 illustrate
P47	剪线后反拉角度 After trimmer and pull back	360	200-360	
P49	剪线速度(r/min) trimmer speed	250	100-500	
P53	抬压脚功能开关 Presser foot lifting function selection	1	0-1	0：关闭 Off　　1：开启 On
P54	背光亮度 Backlight Brightness	100	5-100	
P56	开机自动找上针位 connect power and finding needle position automatically	1	0-1	0：关闭 Off　　1：开启 On
P58	上停针调整角度 adjustment angle of up needle position	83	0-359	角度基准点为主轴 Z 信号 Upper needle stop position setting
P59	下停针调整角度 adjustment angle of down needle position	165	0-359	角度基准点为 P58 上停针角度 Lower needle stop position setting
P60	自动测试速度(r/min) testing speed	2200	200-2200	自动测试模式下的运行速度 Running and hour speed setting
P61	自动测试运行时间(s) Aging operation time	3	1-255	
P62	特殊运行模式 special running mode	0	0-5	0: 正常 normal　1：简易缝 easy sewing 2：初始角测试 initial angle testing

				3：自动测试模式 automatic testing mode
P63	自动测试停止时间(s) aging stopping time	2	1-255	
P66	机头保护功能开关 protection switch of machine head testing	1	0-1	0：关闭 Off　　1: 开启 ALR-UP 报错 Turn on ALR-UP and report an error
P67	机头保护开关逻辑 protection switch of machine head	1	0-1	0：正 just　　1：反 opposite
P70	踏板抬压脚位置 setting of press foot lift position of pedal	800	0-4095	
P71	抬压脚缓放时间 Lift presser foot delay time	100	0-900	
P72	踏板前踩运行开始位置 starting position of pressing the pedal forward	400	0-4095	
P73	踏板低速运行结束位置 end position at low speed	1050	0-4095	调大数值更容易控制单针运行 easier to control single needle operation by increasing the value
P74	踏板最高速度位置 Max value of pedal analog	4000	0-4095	数值越大，最高速度需要前踩越深 The larger the value, the deeper the maximum speed you need to step forward
P75	踏板回中位置 setting of pedal back to middle position	1650	0-4095	自然状态下，踏板对应数值 In natural state, the corresponding value of the pedal
P78	夹线开始角度 1(前加固关闭) Thread clamp ending angle	182	0-359	前加固开启后参考 P248 P248 Reference P248 after front reinforcement is turned on
P79	夹线结束角度 1(前加固关闭) Thread clamp end angle	280	0-359	前加固开启后参考 P249 P248 Reference P249 after front reinforcement is turned on
P80	剪线开始角度 trimming starting angle	7	0-359	角度基准点为下停针角度 The angle reference point is the angle of the stop needle
P81	剪线加力角度 trimming strength angle	100	0-359	角度基准点为下停针角度 The angle reference point is the angle of the stop needle
P82	剪线结束角度 Trimming ending angle	190	0-359	
P83	抬压脚延迟时间(ms) Pedal presser foot confirmation time.	150	1-500	踏板倒踩后，等待一段时间后再抬起压脚 After the pedal is pressed upside down, wait for a while before lifting the presser foot
P84	安全开关报警确认时间(ms) The confirmation time of Safety switch alarm	300	1-500	
P85	安全开关报警恢复时间(ms) The recovery time of Safety switch alarm	50	1-200	
P86	踏板两段斜率转折点速度(r/min) speed of two slopes at a turning point.	1500	0-4000	模式开启，详见 P23Mode is enabled, see P23 for details
P87	踏板两段斜率转折点位置 Two slope intermediate simulation	2700	0-4095	模式开启，详见 P23Mode is enabled, see P23 for details
P88	计件数计数单位 unit of counting	1	1-50	

P89	计件数总数设定 setting of total counting	9999	1-9999	
P90	计件数模式选择 counter mode	0	0-6	0：关闭 off 1：升序循环计数模式 Ascending cycle count 2：降序循环计数模式 Descending cycle count 3：升序计满报错模式 Ascending accounting to full, alarm and stop running 4：降序计满报错模式 Descending accounting to 0, alarm and stop running 5：升序计满报错提示继续运行模式 Ascending accounting to full, remind and keep running 6：降序计满报错提示继续运行模式 Descending accounting to 0, alarm and keep running
P91	针数计数值 Stitch count value	0	0-9999	
P92	件数计数值 Piece count value	0	0-9999	
P93	语音开关 Voice switch	1	0-1	0：关闭 Off 1：开启 On
P94	开机语开关 Start language switch	1	0-1	0：关闭 Off 1：开启 On
P95	语言切换 Voice country switching	0	0-5	0、中文 Chinese；1、英语 English； 2、俄罗斯语 Russian；3、孟加拉语 Bengali； 4、越南语 Vietnamese； 5、波兰语 Polish；
P96	语音音量 Voice volume	20	0-20	
P97	面板针距(mm) Panel Stitch Pitch	80	0-80	同针距加/减按键功能，实际针距=数值*0.1 Add/subtract button function for the same needle distance, actual needle distance = value * 0.1
P98	锁针模式 Condense stitch mode selection	0	0-3	0 关闭 1-前锁针 2-后锁针 3-前后锁针 0-Close 1-Front encryption 2-Back encryption 3-Front and back encryption
P99	针距锁开关 Stitch lock	0	0-1	0：关闭 1：开启后针距锁定在当前设定的值 0:Off 1：On
P100	手动倒缝切换过程降速开关 Manual inverted seam switching speed limit function selection	0	0-1	0：关闭 1：开启，切换过程主轴降速 0:Off 1：On
P106	前加固停车位置 Forward reinforcement stop position	0	0-1	0：停在第 2 个针孔 1：停在第 1 个针孔 0：Stop at the second needle hole 1：Stop at the first needle hole
P107	防断针功能开关 Safety needle break selection switch	1	0-1	0：关闭 Off 1：开启 On
P108	防断针开始主轴角度 Safety needle break starting mechanical angle	20	0-359	
P109	防断针结束主轴角度 Safety needle break finished mechanical angle	90	0-359	
P110	多段缝中途剪线，后加固功能开关 fixed stitches trimmer in sewing and then bartack selection switch	0	0-1	0：关闭，未缝完一段不执行后加固缝 1：开启 0:Off 1：On

P117	物联网功能开关 IOT function switch	1	0-1	0：关闭 Off　1：开启 On
P124	前锁针针距 Starting condense stitch length	5	0 - 50	
P125	前锁针方向 Starting condense stitch direction	0	0-1	0：正缝　1：倒缝 0- forward stitch 1- reverse stitch
P126	前锁针速度(r/min) Starting condense stitch speed	1000	100 - 2500	
P127	前锁针针数 Starting condense stitch needle number	2	0 - 12	
P128	后锁针针距 Ending condense stitch needle	12	0 - 50	
P129	后锁针速度(r/min) Ending condense stitch speed	1000	100 - 2500	
P130	后锁针针数 Ending condense stitch needle number	2	0 - 12	
P131	后锁针方向 Ending condense stitch needle number	0	0 - 1	0：正缝　1：倒缝 0- forward stitch 1- reverse stitch
P132	花样缝限速(r/min) Pattern sewing max speed	1200	200~1200	
P133	零针距校正 Zero Stitch Pitch Correction	-10	-999 ~999	步进 Z 信号相对于 0mm 的偏移 Step Z signal relative to 0mm offset
P134	停车时步进位置校正 Step position correction when stopping	100	0 -2500	步进 Z 信号相对于步进停车的偏移 Step Z signal offset relative to step stop
P161	正缝针距速度补偿（百分比） Positive stitch length speed compensation (percentage)	100	70-130	根据速度调整针距大小，根据速度按照比例放大针距 Adjust stitch size based on speed, proportionally increase stitch size according to speed
P162	倒缝针距速度补偿（百分比） Reverse stitch length speed compensation (percentage)	100	70-130	根据速度调整针距大小，根据速度按照比例放大针距 Adjust stitch size based on speed, proportionally increase stitch size according to speed
P171	正缝针距补偿比例 Stitching needle length compensation ratio	100	70-130	
P172	倒缝针距补偿比例 Reverse stitching needle length compensation ratio	100	70-130	
P173	中途抬压脚高度 Mid-sewing presser foot lift height	9	1-16	
P174	剪线后抬压脚高度 Presser foot lift height after thread cutting	13	1-16	
P175	抬压脚 1mm 高度校正 Presser foot lift 1mm height correction	400	-999~999	
P177	压脚下落速度(r/min) Presser foot drop speed (r/min)	700	100-800	
P179	压脚抬起速度(r/min) Presser foot lift speed (r/min)	700	200-800	
P181	抬压脚最大高度	16	0-16	限制 P173 中途抬压脚高度和 P174 剪线后抬压脚高度

	Maximum presser foot lift height			Limit P173 mid-sewing presser foot lift height and P174 presser foot lift height after thread cutting
P182	抬压脚超时保护时间(s) Presser foot lift timeout protection time (s)	60	1-60	压脚抬起后最长的保持时间，超时后压脚自动下落 The longest holding time after the presser foot is lifted, after which the presser foot automatically drops
P183	步进针距切换时主轴的角度 Main shaft angle during step stitch length switching	150	0-359	正缝与倒缝切换时主轴的角度，主轴转速较高，步进电机切换正缝和倒缝时可调小参数保证针距不变小。 Main shaft angle during switching
P193	1/2 针距按键的模式 Mode of the 1/2 stitch length button	0	0-5	0：1/2 针距 1/2 Stitch length 1：1/4 针距 1/4 Stitch length 2：1/8 针距 1/8 Stitch length 3：倒 1/2 针距 Back 1/2 stitch length 4：倒 1/4 针距 Back 1/4 stitch length 5：倒 1/8 针距 Back 1/8 stitch length
P194	起缝第一针速度 First stitch speed at the beginning of sewing	600	100-1500	0 表示不限速 0 indicates no speed limit
P195	起缝第二针速度(前加固关闭) Second stitch speed at the beginning of sewing (pre-stitching reinforcement off)	1200	100-2000	0 表示不限速 0 indicates no speed limit
P196	起缝第三针速度(前加固关闭) Third stitch speed at the beginning of sewing (pre-stitching reinforcement off)	0	100-2500	0 表示不限速 0 indicates no speed limit
P197	针距单位模式 Stitch length unit mode	0	0-1	0：毫米单位（详见 P97）Millimeter unit(See P97 for details) 1：英制单位（详见 P198）imperial units(See P198 for details)
P198	针距 2(英制单位) Stitch length 2 (imperial units)	12	5-47	每英寸缝纫的针数 Stitches per inch
P202	母线电压校正 Bus voltage correction	0	-30~30	
P220	步进中间停针距保持最大电流 Step mid-stop stitch length maintains maximum current	18	15-20	
P230	最大针距限制 Maximum stitch length limit	80	0-80	限制最大针距可调范围，最上层限制 Top layer limit
P247	多段缝剪线模式 Multi-segment sewing and cutting thread mode	0	0-2	0：剪线后从第一段开始 0：Start from the first segment after cutting the thread 1：每段结束后自动剪线，剪线后从下一段开始 1：Automatically cut the thread at the end of each segment, and start from the next segment after cutting the thread 2：每段结束后不自动剪线，剪线后从下一段开始 2：Do not automatically cut the thread at the end of each segment; start from the next segment after cutting the thread
P257	测穿刺力模式 Puncture force measurement mode	0	0-1	0：8 针距；1：缝纫针距 0：8 stitch spacing；1：Stitch spacing in sewing
P268	中间停上停针位置 Middle stop needle position	335	310-350	

P269	手动转动手轮步进电机切针距位置 Manual handwheel rotation stepper motor stitch length position	165	150-200	防缝料抖动 Prevent fabric from shaking
P270	多段缝模式连接后固缝限速速度 Multi-segment sewing mode connection fixed-stitch speed limit	1000	100-2800	
P271	多段缝模式连接后固缝限速针数 Multi-segment sewing mode connection fixed-stitch speed limit stitch count	0	0-99	
P272	多段缝模式前固缝后切换限速速度 Multi-segment sewing mode pre-fixed-stitch switch speed limit	1000	100-2800	
P273	多段缝模式前固缝后切换限速针数 Multi-segment sewing mode pre-fixed-stitch switch speed limit stitch count	0	0-99	
P336	助力膝靠压脚高度 knee support presser foot height	16	1-16	
P337	膝靠功能选择 Knee support function selection	1	0-2	0：关闭 Off；1：助力膝靠 Assisted knee support； 2：电子膝靠 Electronic knee support
P338	助力膝靠开始电压值 Assist knee support start voltage value	3700	0-4000	
P339	助力膝靠结束电压值 Assist knee support end voltage value	2000	200-2600	
P340	膝靠初始高度设置 Knee support initial height setting	4	0-13	
P341	初始高度电压设置 Initial height voltage setting	100	0-1000	
P342	中间电压设置 Middle voltage setting	20	0-1000	
P343	半后踏抬压脚功能 Half rear tread lift press foot function	1	0-1	0：关闭 Off； 1：开启 on；
P344	压脚高度比例缩放 Press foot height ratio scaling	0	-15~15	
P346	膝靠步进抬压脚加速度 Knee support step lift press foot acceleration	8	0-100	

3.9.3 监控参数表（开机后按 P 键+抬压脚键进入）

Monitoring parameter list (press P + press foot lifter key to enter)

参数编号 number	参数描述 description	参数编号 number	参数描述 description
M10	针数计数值 stitches account number	M23	初始角度 Initial angle
M11	件数计数值 pieces account number	M24	机械角度 Mechanical angle
M13	操作面板软件版本号	M25	踏板前踩模拟量最大值

	panel version number		Max value for pedal forward press
M18	控制器主板软件版本号 main board version number for control box	M26	踏板回中模拟量采样值 Sample value for pedal back
M20	母线电压 Generatrix Voltage	M28	踏板剪线模拟量采样值 Sample pedal value of trimming
M21	机头速度 Machine speed	M30-M37	历史故障代码 Historical Error number
M44	步进参考位置 Step reference position	M45	步进 Z 信号 Step Z signal
M46	主轴 Z 信号 Main spindle Z signal	M58	步进电机开机找电角度值 Step motor start-up to find electrical angle value
M59	步进电机电流值 Step motor current value	M64	步进上次动作最大电流 Step motor last action maximum current

4 错误代码 Error code

4.1 故障代码表 Error code list

若系统出现报错或报警，请首先检查如下项：1 先确认机器的连接线是否连接完好；2 确认电控和机头是否匹配；3 确认恢复出厂是否准确。

if have Error or alarm, please check first as follows:1. Check the connection wire is connected or not; 2. Check the machine head is matched with the control box; 3. check reset is accurate or not.

故障代码	代码含义	解决措施
Err-01	主轴电机过流（硬件） Spindle Motor Overcurrent (Hardware)	1、 关闭系统电源，30 秒后重新接通电源。 Turn off the system power, and turn it on again after 30 seconds. 2、 检查主轴电机编码器、电控是否有损坏等不良现象若有则及时更换。 Check whether the arm shaft motor encoder and electronic control are damaged or in other poor conditions. If so, replace them in time. 3、 排除后重启系统若仍不能正常工作，请拨打 4008876858。 If the system still does not work properly after troubleshooting and restart. Please contact your local service provider or call 4008876858.
Err-02	主轴电机过流（软件） Spindle Motor Overcurrent (Software)	
Err-03	欠压 System undervoltage	断开控制器电源，检查输入电源电压是否低于 176V。若电源电压低于 176V，请在电压恢复正常后重新启动控制器。若电压恢复正常后，启动控制器仍不能正常工作。请联系当地服务商或拨打 4008876858。 Disconnect the power supply of the controller and check whether the input power supply voltage is lower than 176V. If so, please restart the controller after the voltage returns to normal. If the voltage returns to normal, it still does not work properly after the controller starts up. Please contact your local service provider or call 4008876858.
Err-04	过压（停机时） Overvoltage during shutdown	断开控制器电源，检查输入电源电压是否高于 264V。若电源电压高于 264V，请在电压恢复正常后重新启动控制器。若电压恢复正常后，启动控制器仍不能正常工作。请联系当地服务商或拨打 4008876858。 Disconnect the controller power and check whether the input power voltage is higher than 264V. If so, please restart the controller after the voltage returns to normal. If the voltage returns to normal, it still does not work properly after the controller starts up.Please contact your local service provider or call 4008876858.

Err-05	过压（运行时） Overvoltage during operation	断开控制器电源，检查输入电源电压是否高于 264V。若电源电压高于 264V，请在电压恢复正常后重新启动控制器。若电压恢复正常后，启动控制器仍不能正常工作。请联系当地服务商或拨打 4008876858。 Disconnect the controller power and check whether the input power voltage is higher than 264V. If so, please restart the controller after the voltage returns to normal. If the voltage returns to normal, it still does not work properly after the controller starts up.Please contact your local service provider or call 4008876858.
Err-07	主轴电机电流检测回路故障 Arm shaft motor current detection circuit failure	关闭系统电源，30 秒后重新接通电源观察是否能正常工作。重试几次，若该故障频繁出现。请联系当地服务商或拨打 4008876858。 Turn off the system power, and turn on the power again after 30 seconds to see whether it can work properly. Try a few times again. If the fault occurs frequently, please contact your local service provider or call 4008876858.
Err-08	主轴电机堵转 Arm shaft motor stalled	1、 请检查是否有异物缠绕在机头上，检查机器旋梭是否有线头卡死，机器偏心轮是否有卡死现象。 Please check whether there is any foreign object wrapped around the machine head, whether there is any thread residue stuck in the rotating shuttle, and whether the eccentric wheel of the machine is stuck. 2、 断开控制器电源，检查主轴电机电源输入插头是否脱落、松动、破损。 Disconnect the power supply of the controller and check whether the input plug of the arm shaft motor power supply is detached, loose, or damaged. 3、 排除后重启系统仍不能正常工作。请联系当地服务商或拨打 4008876858。 If the system still does not work properly after troubleshooting and restart.Please contact your local service provider or call 4008876858.
Err-10	面板通讯故障 Panel communication failure	1、 请检查操作面板与电控的连线是否脱落、松动、断裂。 Please check whether the connection between the operation panel and the electric control is drops off, loose, or broken. 2、 排除后重启系统若仍不能正常工作。请联系当地服务商或拨打 4008876858 。 If the system still does not work properly after troubleshooting and restart.Please contact your local service provider or call 4008876858.
Err-12	主轴电机初始角度检测故障 Arm shaft motor initial angle detection failure	请断电后再尝试 2-3 次，若仍报故障。请联系当地服务商或拨打 4008876858。 Please try 2-3 times again after power off. If it still fails.Please contact your local service provider or call 4008876858.
Err-13	主轴电机编码器故障 Arm shaft motor zero position fault	1、 关闭系统电源，30 秒后重新接通电源。 Turn off the system power, and then turn on the power again after 30 seconds. 2、 检查主轴电机编码器、电控是否有损坏等不良现象若有则及时更换。 Replace the arm shaft motor encoder. 3、 排除后重启系统若仍不能正常工作，请请联系当地服务商或拨打 4008876858。 If the system still does not work properly after troubleshooting and restart，Please contact your local service provider or call 4008876858.
Err-14	电控 eeprom 故障 Master control eeprom components read/write failure	关闭系统电源，30 秒后重新接通电源，控制器若仍不能正常工作，请联系当地服务商或拨打 4008876858。 Turn off the system power, and then turn on the power again after 30 seconds. If the controller still does not work properly, please contact your local service provider or call 4008876858

Err-15	主轴电机编码器故障（超速） Arm shaft motor overspeed protection	1、 关闭系统电源，30 秒后重新接通电源。 urn off the system power, and then turn on the power again after 30 seconds. 2、 检查主轴电机编码器、电控是否有损坏等不良现象若有则及时更换。 Replace the arm shaft motor encoder. 3、 排除后重启系统若仍不能正常工作，请拨打 4008876858。 If the system still does not work properly after troubleshooting and restart，Please contact your local service provider or call 4008876858.
Err-16	主轴电机编码器故障（电机反转） Arm shaft motor reverse	
Err-17	面板参数读写故障 Pandel date read/write failure	关闭系统电源，30 秒后重新接通电源，控制器若仍不能正常工作，请联系当地服务商或拨打 4008876858。 Turn off the system power, and then turn on the power again after 30 seconds. If the controller still does not work properly, please contact your local service provider or call 4008876858
Err-18	主轴电机过载 Arm shaft motor overload	检查主轴电机是否堵转，若未堵转，请联系当地服务商或拨打 4008876858。 Check whether the arm shaft motor is stalled. If not, please contact your local service provider or call 4008876858.
Err-19	电机类型不匹配 Motor type mismatch	关闭系统电源，30 秒后重新接通电源，控制器若仍不能正常工作，请联系当地服务商或拨打 4008876858。 Turn off the system power, and then turn on the power again after 30 seconds. If the controller still does not work properly, please contact your local service provider or call 4008876858
Err-20	控速器故障	1、 请检查脚踏控速器连接线是否脱落、松动或脚踏控速器是否损坏。 Please check whether the connection cable of the pedal speed controller is drops off, loose, or damaged. 2、 排除后重启系统仍不能正常工作。请联系当地服务商或拨打 4008876858。 If the system still does not work properly after troubleshooting and restart.Please contact your local service provider or call 4008876858.
Err-21	倒缝电机过流（硬件） Backstitch step motor hardware overcurrent	关闭系统电源，检查倒缝电机接插口，重启电控。如若还是报错，请联系当地服务商或拨打 4008876858 Turn off the system power, check the reverse sewing motor connector, and restart the controller. If it still reports an error, please contact the local service provider or call 4008876858
Err-22	倒缝电机过流（软件）过流 Backstitch step motor software overcurrent	
Err-23	倒缝电机电流检测回路故障 Backstitch step motor current detection circuit failure	
Err-24	倒缝电机堵转 Backstitch step motor stalled	
Err-28	倒缝电机编码器故障（Z 信号） Backstitch step motor zero position fault	
Err-29	倒缝电机编码器故障（AB 信号） Reverse sewing motor encoder fault (AB signals)	
Err-30	密码锁 定时停机故障 Password lock timed shutdown fault	达到机器使用设定时间，如需继续使用，请联系当地服务商或拨打 4008876858。 Reached the machine's set usage time. To continue using it, please contact the local service provider or call 4008876858

4.2 安全报警表 Safety alarm meter

报警代码 Alarm code	代码含义 Description	解决措施 Solutions
A-UP	翻台开关报警 alarm of safety switch	摆正机头,确保翻台开关复原 return machine head to normal position, to make sure safety switch rebound
ALR-1	机头按钮短路报警 Alarm of machine head button with short circuit	关闭系统电源，更换机头灯按钮 turn off system power and change the light button of machine head
OFF	电源关闭 Power off	1、电源开关关闭后，面板会显示 OFF，重新打开电源后正常。 After the power switch is turned off, the panel will display OFF. When the power is turned back on, it will operate normally 2、请检查输入电压是否过低。 Please check if the input voltage is too low

成套智联
让服装智造无限可能

杰克股份官方微信　杰克股份官方抖音　杰克资料库　参观杰克

400-8876-858
www.chinajack.com

杰克科技股份有限公司
中国浙江省台州市椒江区三甲东海大道东段1008号
电话：0086-0576-88177788 88177789

JACK TECHNOLOGY CO.,LTD.
NO.1008 DONGHAI AVENUE EAST,JIAOJIANG DISTRICT, TAIZHOU CITY,ZHEJIANG PROVINCE CHINA.
TEL：0086-0576-88177788 88177789