

D9

全自动工业缝纫机伺服控制器

安装使用说明

前 言

感谢您选用本公司的工业缝纫机伺服控制器。

本手册提供了使用该系统所需知识及注意事项。

- 为了您更好地使用该产品，有使用之前请仔细阅读本手册。

您在使用中若有任何疑问或对我们的产品和服务有任何意见，请随时与我们联系。

主要技术数据

供电电压范围：单相AC200V~AC240V±10%

供电电源频率：50Hz/60Hz

整机最大功率：500W

电机额定功率：550W

电机额定转速：6000rpm

电机额定扭矩：0.6 N·m

电机最大扭矩：1.8 N·m

目 录

1 .安全注意事项..... IV

 1.1 使用范围..... IV

 1.2 工作环境: IV

 1.3 注意事项..... IV

 1.4 保养维修..... IV

 1.5 危险提示..... IV

 1.6 接线与接地..... V

 1.7 其它安全规定..... VI

2. 脚踏速控器前后踏力量的调整..... VI

3. 操作面板说明..... VII

 3.1 基本框图..... VII

 3.2 按键定义..... VII

 3.3 按键操作..... VIII

 3.4 基本功能..... XIII

 3.5 指示灯..... XIV

 3.6 界面显示..... XIV

4. 参数说明..... XV

 4.1 包缝参数表 P (用户参数 默认密码 “0000”)..... XV

5. 故障分析..... XXI

 故障表..... XXI

6. 按键说明..... XXII

1.安全注意事项

1.1 使用范围

本伺服控制器及其电机是专为工业缝纫机开发设计的，如果在其它方面使用，请注意使用者的安全。

1.2 工作环境：

- 1.2.1 电源电压请遵照控制箱铭牌所示电压 $\pm 10\%$ 。
- 1.2.2 请远离高频电磁波发射器等，以免所产生的电磁波干扰本控制器而发生错误动作。
- 1.2.3 温湿度：
 - A. 请在室温 5°C 以上、 45°C 以下的场所操作。
 - B. 禁止在日光直接照射的场所或室外运作。
 - C. 请不要过于接近暖气（电热器）运作。
 - D. 请保持 $30\% \sim 95\%$ 相对湿度（无凝露）。
- 1.2.4 请不要在可燃气体或爆炸物附近操作。

1.3 注意事项

- 1.3.1 电机、控制器请遵照说明书进行正确安装。
- 1.3.2 安装前请先关闭电源并拔掉电源线插头，然后进行安装。
- 1.3.3 装钉电源线时请避免靠近会转动部件，最少要离开3公分以上。
- 1.3.4 为防止噪声干扰或触电事故，请将缝纫机、电机、控制箱接地。
- 1.3.5 打开电源之前，确定此供应电压必须符合标示在电机与控制箱铭牌上的指定电压 $\pm 15\%$ 范围内。
- 1.3.6 为了更安全的保护，建议安装使用漏电保护装置和过电压保护装置。
- 1.3.7 缝纫机不使用时或者操作人员离开缝纫机的时候，为了防止突然启动造成事故，请切断电源开关。

1.4 保养维修

- 1.4.1 在操作保养或维修动作前，请先关闭电源。
- 1.4.2 翻抬车头时、更换车针、梭子时、穿线时，请确认电源是否关闭。
- 1.4.3 控制箱里面有高压电，所以关闭电源后要等 5 分钟以上方可打开控制箱盖。
- 1.4.4 修理及保养的作业，要请经过训练的技术人员执行。
- 1.4.5 不能在电机及控制箱运转的状态下进行保养或维修。
- 1.4.6 所有维修用的零件，须由本公司提供或认可，方可使用。

1.5 危险提示



左图所示符号表示机器在安装时，安全上需要特别注意，忽视此标记而进行错误操作可能会导致人员或是机器损伤。

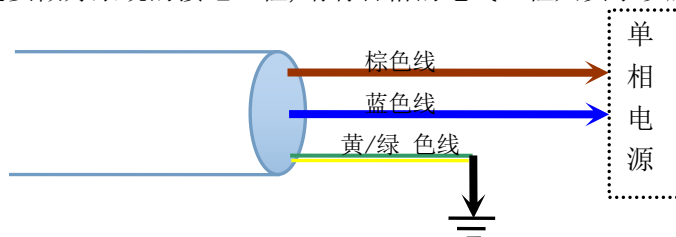


左边这个标记符号表示有高压电，电气方面有危险的地方会有此标记。

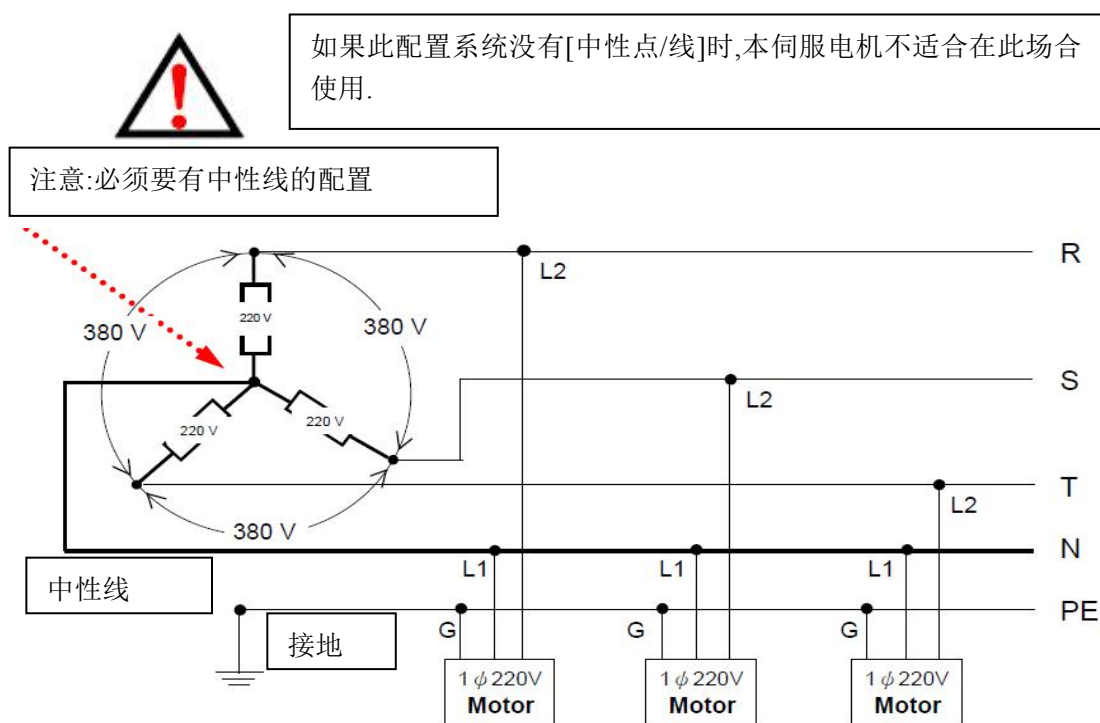
1.6 接线与接地

1.6.1 单相电源线的接法

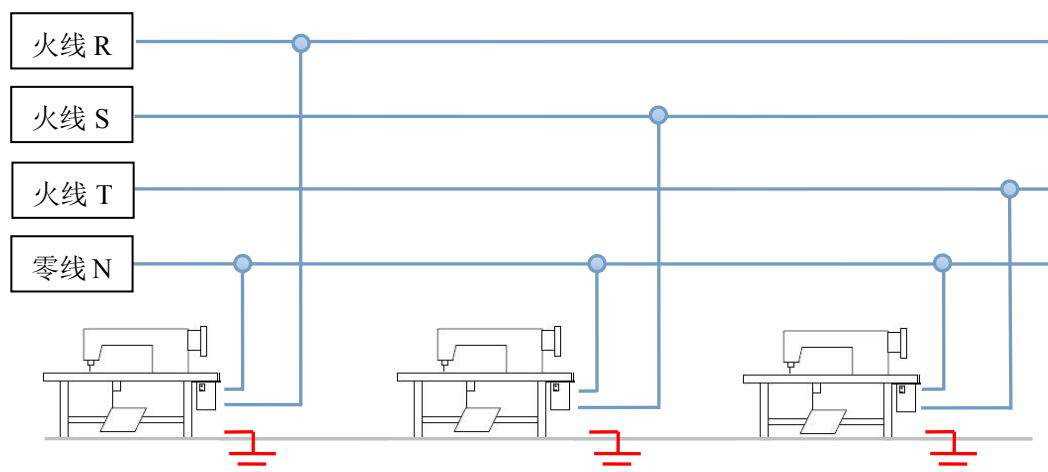
黄绿色电线为接地线, 一定要做好系统的接地工程, 请有合格的电气工程人员予以施工.



1.6.2 当电源系统配置为三相四线式380V时, 欲使用单相220V供应本电机的接线方式



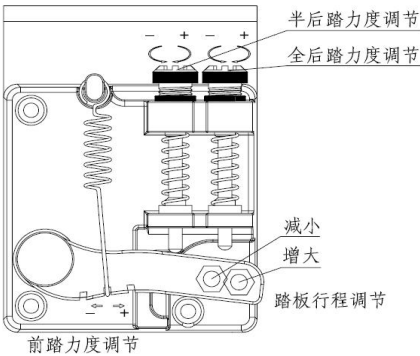
1.6.3 当单相220V伺服电机欲使用在三相四线的电压时, 须注意配置使用上的负载平衡。连接相当多数量缝纫机配置使用时, 需考虑三相中R, S, T各相的平衡, 如下图所示:



1.7 其它安全规定

- 1.7.1 在第一次接通电源后，请先以低速操作缝纫机并检查转动方向是否正确。
- 1.7.2 缝纫机运转时，请不要去触摸手轮、机针等会动作的部件。
- 1.7.3 所有可动作的部份，必须以所提供的防护装置加以隔离，防止身体接触并请勿在装置内塞入其它物品。
- 1.7.4 请不要在拆下电机护罩及其它安全装置的情形下操作。
- 1.7.5 请勿使电机或控制箱掉在地上。
- 1.7.6 不要让茶水等液态物体流入控制箱或电机内部。

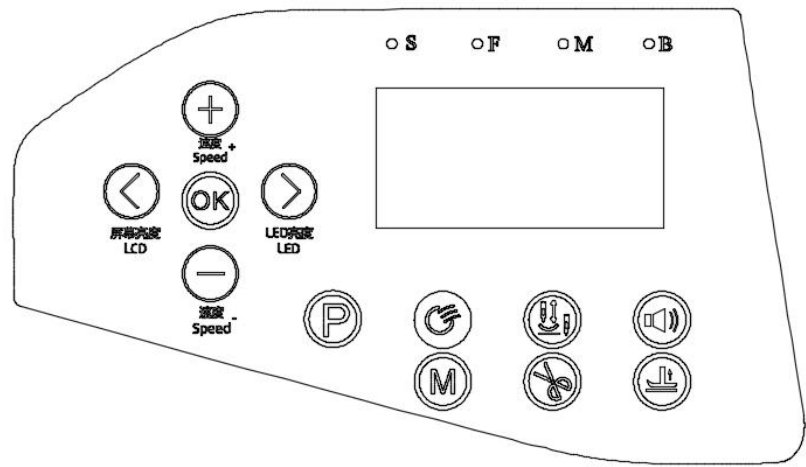
2. 脚踏速控器前后踏力量的调整



调整项目	调 整 结 果
1 踏板前踏力量	当弹簧愈向右侧勾时力量愈重； 当弹簧愈左侧勾时力量愈轻。
2 踏板后踏力量	当螺栓愈往上时力量愈轻；当螺栓愈往下时力量愈重。
3 踏板行程长短	当吊杆装右侧孔时行程较长；当吊杆装左侧孔时行程较短。

3. 操作面板说明

3.1 基本框图



显示面贴由模式按键区（4 个模式按键：电眼选择、吸风、剪线、停车位）、功能按键区（3 个功能按键：速度调整、菜单、亮度调整）、设定按键区（5 个设定按键：左、右、加、减、确认）、LED 提示区（4 个提示 LED 灯：安全开关、前传感器、中传感器、后传感器）、显示区等部分组成。

3.2 按键定义

序号	图标	功能	说明
1		针位模式调整键	设置缝纫中针位的模式
2		常用参数键 / 退出键	进入常用参数选择列表
3		声音键	语言开/闭
4		左移键	参数调整时，光标向左移一位 机头灯亮度调整
5		右移键	参数调整时，光标向右移一位 机头灯亮度调整
6		确认键	参数确认
7		加号键	参数调整时，对应位数值加 1 速度参数调整时，对应数值加 1
8		减号键	参数调整时，对应位数值减 1 速度参数调整时，对应数值减 1

9		缝纫模式调整键	电眼开关、模式选择
10		吸风模式调整键	选择吸风模式
11		剪线模式调整键	选择剪线模式
12		压脚模式调整键	设置缝纫中抬压脚的模式
13		安全开个指示灯	红色指示灯
14		前传感器信号指示灯	蓝色指示灯
15		中传感器信号指示灯	绿色指示灯
16		后传感器信号指示灯	黄色指示灯
17		电源指示灯	翠绿色指示灯（操作面板右上角）

3.3 按键操作

3.3.1 模式按键操作

- ：电眼开关选择，模式调整，在半自动、全人工之间循环。
- ：吸风调整，前吸风、后吸风、前后吸风、关闭之间调整。
- ：剪线调整，前剪线、后剪线、前后剪线、关闭之间调整。
- ：针位选择，上针位、下针位之间循环。

3.3.2 功能按键操作

1)参数修改：

包缝参数一区修改：

按键，进入包缝参数一区密码输入界面，显示：

包缝参数
4 位密码
限制次数

密码的输入有三次机会，如果三次输入均不通过，则不允许再次输入；需要重新上电后才能再次拥有 3 次输入的机会。

用户通过键输入正确的密码；

按可直接进入参数界面，下次进入时需要重新输入密码；

参数界面下显示相应的参数序号及参数内容：

参数号	参数值
参数说明	

用户通过 $\oplus \ominus \triangleright \triangleleft$ 键，切换不同的参数，修改对应的参数值，按 $\textcircled{\text{OK}}$ 键确认。

如需退出，按 $\textcircled{\text{P}}$ 键退出到主界面。

2)包缝参数二区修改:

长按 $\textcircled{\text{P}} + \textcircled{\text{=}}$ 键 3 秒，进入包缝参数二区密码输入界面，显示:

包缝参数
4 位密码
限制次数

密码的输入有三次机会，如果三次输入均不通过，则不允许再次输入；需要重新上电后才能再次拥有 3 次输入的机会。

用户通过 $\oplus \ominus \triangleright \triangleleft$ 键输入正确的密码；

按 $\textcircled{\text{OK}}$ 可直接进入参数界面，下次进入时需要重新输入密码；

参数界面下显示相应的参数序号及参数内容:

参数号	参数值
参数说明	

用户通过 $\oplus \ominus \triangleright \triangleleft$ 键，切换不同的参数，修改对应的参数值，按 $\textcircled{\text{OK}}$ 键确认。

如需退出，按 $\textcircled{\text{P}}$ 键退出到主界面。

3)按 $\oplus \ominus$ 键，进入电机最高转速设定界面，显示如:

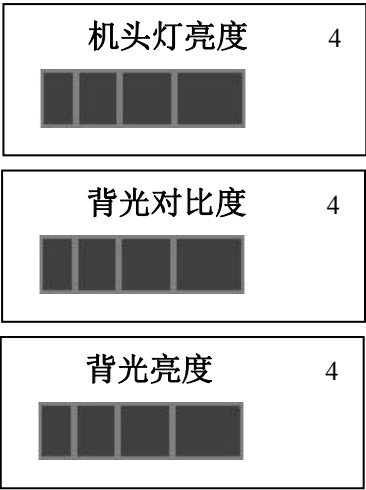
电机速度
最高速度 速度值
速度图片

用户通过 $\oplus \ominus$ 修改最高速度的数值，按 $\textcircled{\text{OK}}$ 键确认或者按 $\textcircled{\text{P}}$ 键退出。

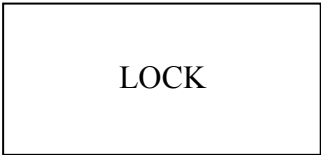
4)按 $\triangleright \triangleleft$ 键，可设置机头灯亮度。0~6 之间循环，方格条显示数值。如下:

机头灯亮度	4
	

4.1)以上界面下，如按 $\triangleright \triangleleft$ 可选择，机头灯亮度，背光对比度，背光亮度的参数设置。如下:

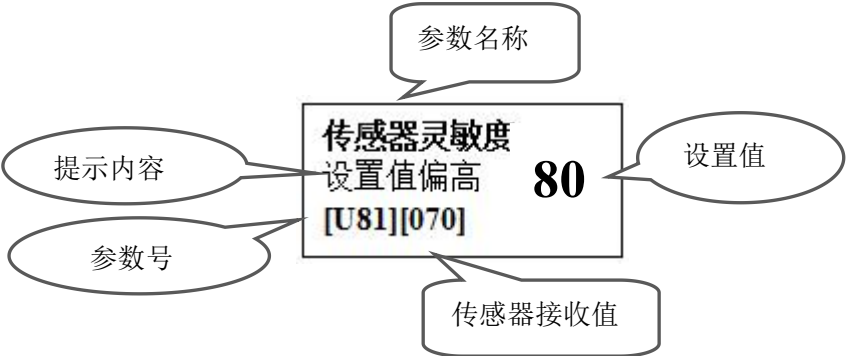


5) 长按 键，可将上位机锁定，电机停止运行，显示如：



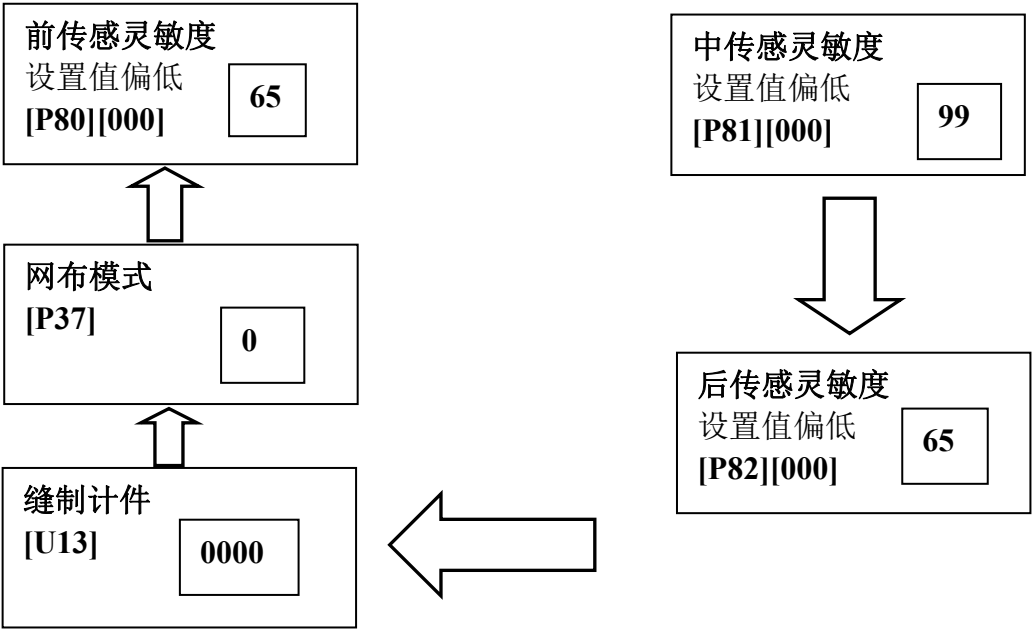
如需解锁，长按 + 键，按提示可解锁，显示界面回到主界面。

6) 长按 "电眼" 键，可进入 "传感器" 相关的快捷参数设置。如下图，称为**快捷参数**界面。



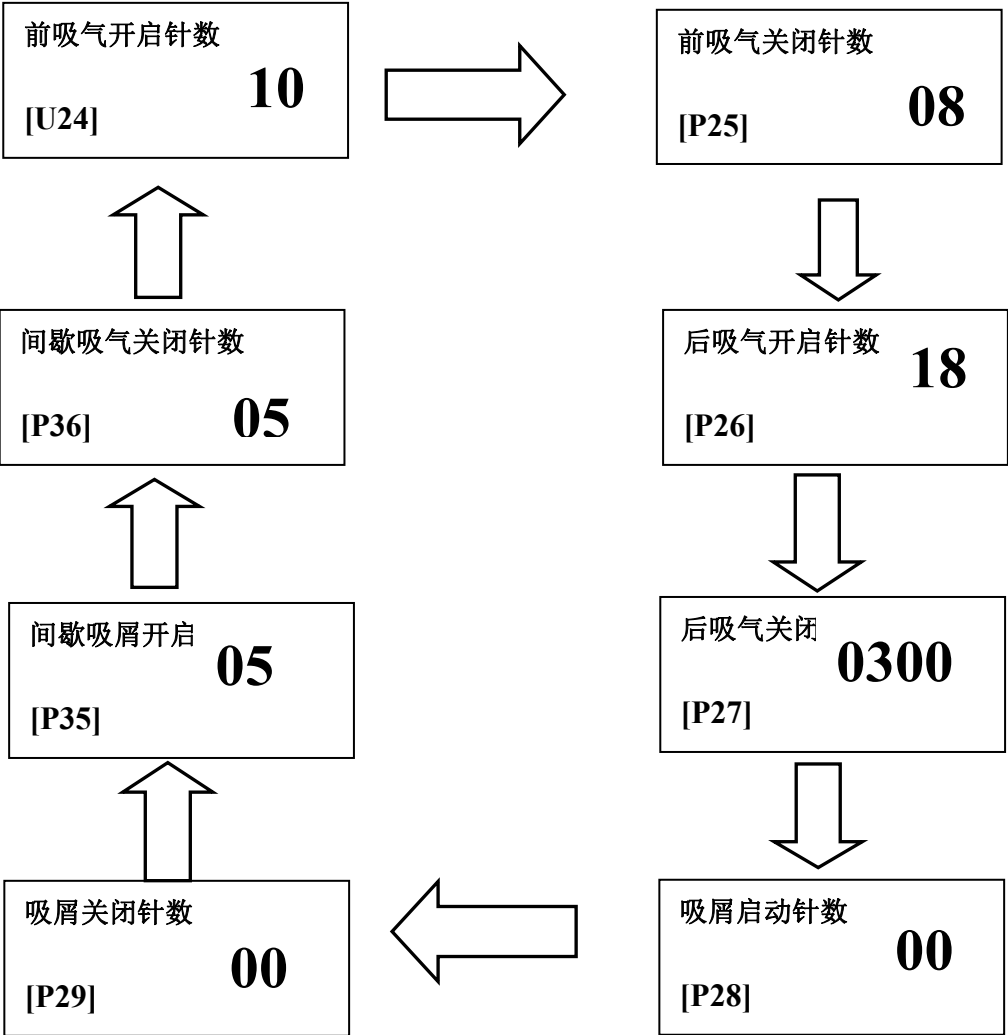
用户通过 修改数值，按 键确认或者按 键退出。

6.1) 快捷参数界面下，按 " " 键，可切换传感器灵敏度和传感器响应值。



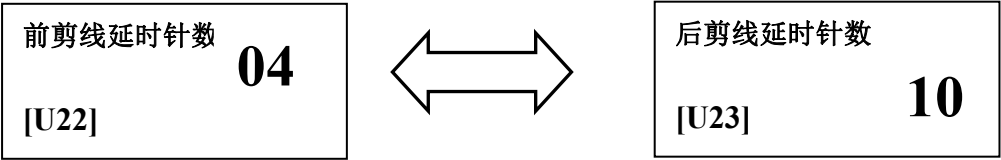
用户通过⊕⊖⊙⊚修改数值，按Ⓚ键确认或者按Ⓟ键退出。

6.2) 按"Ⓢ"键，可切换前吸气开启针数、前吸气关闭针数、后吸气开启针数、后吸气关闭针数、吸屑启动针数、吸屑关闭针数、间歇吸屑开启针数、间歇吸屑关闭针数。



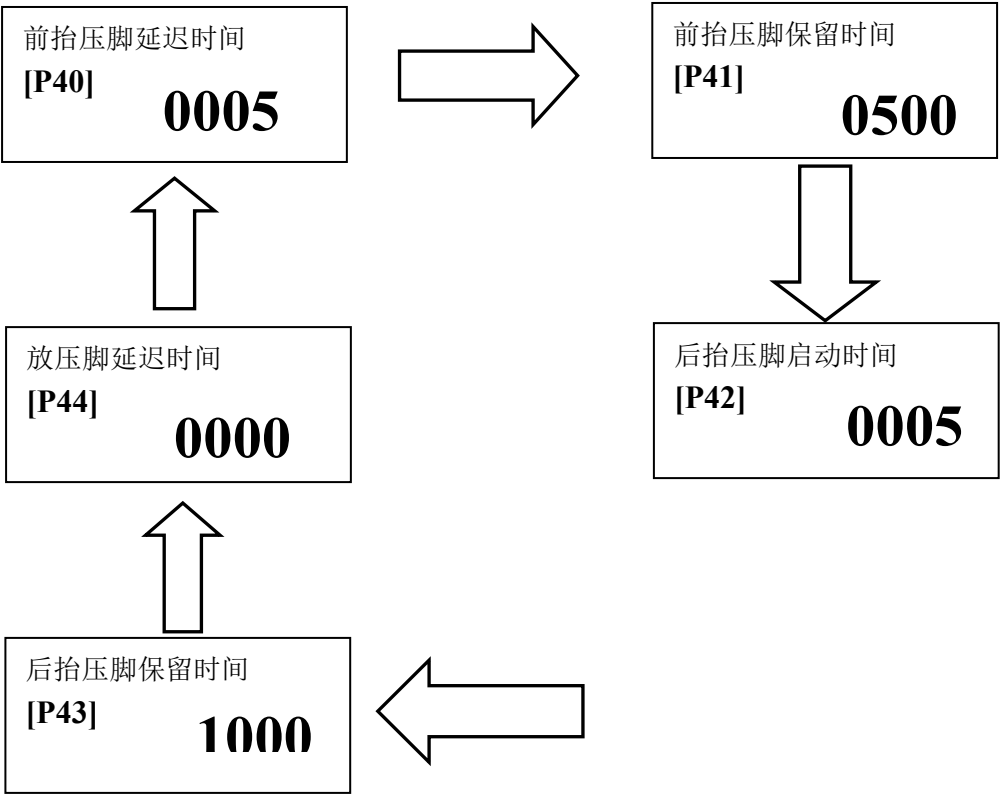
用户通过     修改数值，按  键确认或者按  键退出。

6.3) 长按 " " 键，可切换前剪线延时针数、后剪线延时针数。



用户通过     修改数值，按  键确认或者按  键退出。

6.4) 按 " " 键，可切换前抬压脚延迟时间，前抬压脚保留时间，后抬压脚启动时间，后抬压脚保留时间，放压脚延迟时间。



用户通过     修改数值，按  键确认或者按  键退出。

长按 " 吸风 " 吸风&吸屑参数

长按 " 切线 " 切线参数

长按 " 停针位 " 上针位角度调整

长按 " 压脚 " 压脚参数调整

7) 常用参数修改：

按  键进入常用参数选择列表界面，显示：

常用参数 1
 常用参数 2
 常用参数 3

用户可通过   键选择要设定的参数，按  可进入参数界面设定参数值；

也可通过长按 、、 键快捷选择其相关的参数项。

3.4 基本功能

3.4.1 红外传感器检测

安装好后，进入参数区，通过按键调整 1 号参数，对应传感器，使其在“合适”的范围之内。

(80 前通道灵敏度；81 中通道灵敏度)

注意调整前，先将模式改为人工或半自动，或者将上位机锁定，防止调整时出现运转。

3.4.2 缝纫模式

缝纫模式分为：全智能、半智能、全电脑。

全智能模式：当前传感器检测到有布信号后按设定情况自动运行，无须脚踏控速器，控速器可作中途停止与紧急制动。

半智能模式：当前传感器检测到有布信号后，需脚踏控速器运行，压脚、剪线、吸风设定后自动动作。

全电脑模式：须脚踏控速器，运行，无其他动作。

按  键可切换模式。

3.4.3 剪线模式

剪线采用外剪刀，分前、后剪线，自动模式下，根据布料可以进行自动动作，手动剪刀开关可以在设定的情况下，进行按键开启剪刀。

按  键可调整剪线模式参数。

3.4.4 吸风模式

吸风分前、后吸风，自动模式下，根据布料可以进行自动吸风，手动开关也可控制手动剪线时进行吸风。

按  键可调整吸风模式。

3.4.5 压脚模式

压脚分前、后抬压脚，自动模式下，根据布料可以进行自动抬压脚，全脚踏也可控制压脚抬起。

按  键可调整压脚模式。

3.4.6 显示亮度

显示亮度分机头灯亮度、背光亮度、背光对比度，均有 0-6 档可调。

按键可选择调整显示亮度模式。

3.5 指示灯

- **S** 安全开关灯：安全开关指示，红色，当安全开关参数处于开启状态时，安全开关出现警报时，指示灯闪烁，提示警报；当安全开关参数处于关闭状态时，安全开关失效，指示灯长亮，提示安全开关处于失效状态。
- **F** 前传感器灯：前传感器信号指示，蓝色，当传感器接收到信号（有布）情况下指示灯亮。
- **M** 中传感器灯：后传感器信号指示，绿色(*黄色)，当传感器接收到信号（有布）情况下指示灯亮。
- **B** 后传感器灯：电机运转指示，黄色，电机转动时指示灯亮。
- 电源指示灯：长亮，翠绿色，出现故障时，闪烁报警。

3.6 界面显示

3.6.1 上电开机显示

版本：（上版本号）
（下版本号）
（进度条图片）

正常开机显示，上电后持续 2-3 秒时间后，如无故障，进入工作显示界面。

3.6.2 待机模式下的显示 如：

抬压脚：前后抬
吸气 ：前后吸
剪线 ：前后剪
工作 ：半自动

3.6.3 模式选择的显示 如：

全电脑模式
半智能模式
全智能模式

3.6.4 出现故障显示内容 如：

故障： E-12
吸气 ：前后吸
剪线 ：前后剪
工作 ：半自动

当电控与面板出现故障时，显示故障相应代码，并简要显示故障名称，出现故障时，部分按键将锁定。

3.6.5 关机

4. 参数说明

参数设定说明，其中序号带 * 表示该参数修改后需要重新上电才能生效。

(RPM: 转/分、ms: 毫秒、s: 秒、hour: 小时、mm: 毫米)

4.1 包缝参数表 P (用户参数 默认密码“0000”)

*1:以下参数变更，会明确标注版本。(请用户仔细核对版本)

序号	功能参数	默认值 砍刀	默认值 侧吸	设定范围	单位	参数说明
P1	工作模式	0	0	0~1		0: 半自动 1: 全自动
P2	电眼选择	1	1	0~1		0: 关闭 1: 开启
P3	自动剪线	3	3	0~3		0: 关闭 1: 前剪 2: 后剪 3: 前后剪 侧吸小电机使用此参数
P4	自动吸气	1	3	0~3		0: 关闭 1: 前吸 2: 后吸 3: 前后吸
P5	自动吸屑	3	3	0~3		0: 关闭 1: 长吸 2: 间吸 3: 前后吸
P6	自动抬压脚	0	0	0~3		0: 关闭 1: 前抬 2: 后抬 3: 前后抬
P7	松线开关	0	2	0~1		0: 关闭 1: 开启
P8	预留	0	0	0~1		
P9	半自动动作	3	3	0~3		0: 普通缝 1: 略 2: 连续缝 3: 自由缝
P10	半自动速控模式	0	0	0~1		0: 关闭 1: 开启
P11	电机调速锁定	0	0	0~1		0: 关闭 1: 开启
P12	最高速度	6000	6000	200~6000	RPM	
P13	音量	20	20	0~30		音量大小
P14	运行锁	0	0	0~1		0: 关闭 1: 开启
P15	起缝速度	5500	5500	200~6000	RPM	
P16	起缝针数	35	0	0~200		
P17	吸风自动调整	0	0	0~1		0: 关闭 1: 开启
P18	中途吸风模式	0	0	0~2		0: 关闭 1: 间吸 2: 长吸
P19	间歇吸风开启针数	25	25	0~1000		

P20	间歇吸风关闭针数	25	25	0~1000		
P21	两传感器间针数	50	55	0~99		
P22	前剪线延迟针数	3	3	0~99		
P23	后剪线延迟针数	6	6	0~99		
P24	前吸气开启针数	1	1	0~99		
P25	前吸气关闭针数	1	18	0~99		
P26	后吸气开启时间	12	2	0~99		
P27	后吸气关闭针数	300	900	100~9999		
P28	吸屑启动针数	1	0	0~99		
P29	吸屑关闭针数	1	0	0~99		
P30	松线开启针数	0	6	0~99		
P31	松线关闭针数	200	500	0~50		
P32	松线运行针数	5	15	0~99		
P33	松线运行速度	5000	5000	200~6000		
P34	连续布料间针数	0	0	0~99		
P35	间歇吸屑开启针数	25	25	2~99		
P36	间歇吸屑关闭针数	25	25	2~99		
P37	网布模式	0	0	0~1		
P38	自动停车	1	1	0~2		0: 关闭 1: 开启 2: 自动计算停车
P39	停车延迟针数	25	35	5~200		
P40	前抬压脚延迟时间	5	5	5~6000		
P41	前抬压脚保留时间	500	500	5~6000		

P42	后抬压脚启动时间	5	5	5~6000		
P43	后抬压脚保留时间	1000	1000	0~9999		
P44	放压脚延迟时间	0	0	0~1000		
P45	中途间歇吸屑停留	350	500	50~9999		
P46	自动切刀保留时间	20	20	15~9999		
P47	后踏吸气时间	500	500	50~9999		
P48	后踏剪线时间	50	200	0~5000		
P49	手动吸气时间	120	180	0~5000		
P50	手动切线时间	60	220	0~5000		
P51	后踏吸气开关	0	0	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P52	后踏剪线开关	0	4	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P53	手动吸气开关	7	7	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P54	手动切线开关	7	7	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动

						开;7 人工半自动全自动开
P55	手动切线动作有效	0	2	0~2		0 无布时动作 ;1 有布时动作 ;2 随时动作
P56	手动松线动作有效	2	2	0~2		0 无布时动作 ;1 有布时动作 ;2 随时动作
P57	后踏切线动作有效	0	0	0~2		0 无布时动作 ;1 有布时动作 ;2 随时动作
P58	后踏松线动作有效	0	0	0~2		0 无布时动作 ;1 有布时动作 ;2 随时动作
P59	后踏松线开关	4	0	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P60	手动松线开关	7	7	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P61	侧吸刀模式	0	1	0~3		0:关; 1:前; 2:后; 3:前后
P62	前侧切开启针数	10	5	0~99		
P63	前侧切关闭针数	25	25	0~99		
P64	后侧切开启针数	0	5	0~99		
P65	后侧切关闭时间	1000	500	0~5000		
P66	前松线开启针数	5	5	0~99		
P67	前松线关闭	15	15	0~99		

	针数					
P68	预留	0	1	0		
P69	预留	0	0	0		
P70	预留	0	0	0		
P71	预留	0	0	0		
P72	预留	0	0	0		
P73	预留	0	0	0		
P74	预留	0	0	0		
P75	刹车针位	0	0	0~1		
P76	人工模式关闭电眼	0	0	0~6		
P77	前电眼响应时间	50	50	0~4920		
P78	中电眼响应时间	10	10	0~4920		
P79	后电眼响应时间	10	10	0~4920		
P80	前电眼灵敏度	65	65	0~99		
P81	中电眼灵敏度	65	65	0~99		
P82	后电眼灵敏度	65	65	0~99		
P83	前电眼响应值	50	50	5~120		
P84	中电眼响应值	50	50	5~120		
P85	后电眼响应值	50	50	5~120		
P86	安全开关	5	5	0~7		0 全关;1 人工开;2 半自动开;3 全自动开;4 人工和半自动开;5 半自动全自动开;6 人工全自动开;7 人工半自动全自动开
P87		1	0			
P88		1	0			
P89	压脚保护时间	30	30	0~30		
P90	界面恢复时间	300	300	0~9999		0: 关闭 1~9999: 5~9999S
P91	背光对比度	3	3	0~6		

P92	背光亮度	6	6	0~6		
P93	机头灯亮度	4	4	0~6		
P94	参数密码	0	0	0~9999		
P95	恢复出厂设置	0	0	0~9999		
P96	语言	0	0	0~2		0: 中文 1: 英文
P97	软件版本 1	0	0	0~9999		
P98	软件版本 2	0	0	0~9999		
P99	软件版本 3	0	0	0~9999		

5. 故障分析

故障表

故障显示代码		故障原因	故障排除方法
E1		系统故障	断电后检查机头是否卡住，然后重新上电，如果还不能解决，请联系售后服务人员
E2		系统过压 电 源 电 压	请检查电源电压是否正常。如果电源电压高于 265V，请关机，等电源电压恢复正常再开机
E3		系统欠压	请检查电源电压是否正常。如果电源电压低于 160V，请关机，等电源电压恢复正常再开机
E4		电机码盘故障	请检查电机连线是否正常。
E5		系统故障 电流传感器	重新上电，如果还不能解决，请联系售后服务人员
E6		系统故障 电流传感器	重新上电，如果还不能解决，请联系售后服务人员
E7		电机缺相	请检查电机电源线是否脱落或松动。
E8		电机堵转	1、请检查机头是否被卡住 2、电机电源端子脱落或松动
E9		电机过载	1、请检查机头是否被卡住 2、请检查布料是否太厚
E10		电机码盘故障(电角度错误)	请检查电机码盘线是否松动
E12		脚踏脱落故障	请检查电机脚踏连接线是否松动
E13		脚踏上电时被踩下	请检查电机脚踏是否被卡住
E16		电机通讯故障	
E17		电磁铁过流故障	电磁铁故障，请检查电磁铁是否损坏或短路。
E15、 E18		刹车控制电路故障	请检查刹车电阻连接线是否松动
E19、 E20、 E21		定位系统故障无效	电机可继续运转，但无针数记数、针位定位及电磁铁无输出功能 请检查手轮传感器连线是否正常。 请检查机头是否被卡住。

E22		上位机通信故障	请检查控制面板与驱动器的连线是否正常
E23		EEPROM 故障 主板	重新上电，如果还不能解决，请联系售后服务人员
			
E30		电机动力线脱落或松动	
E33		接口板通讯故障	重新上电，如果还不能解决，请联系售后服务人员
E34		接口板效应故障	重新上电，如果还不能解决，请联系售后服务人员
E35		压脚安全开关断开	请检查压脚安全开关
E36		缝台安全开关断开	请检查缝台安全开关
E37		操作故障	全智能上电时检测到传感异常
E38		版本查询限制	请联系售后服务人员
E39		上位机 EEPROM 故障	重新上电，如果还不能解决，请联系售后服务人员
E40		电磁铁过流（包缝机）	电磁铁故障，请检查电磁铁是否损坏或短路。
E41		针杆安全开关	
E42		传感器故障	传感器接收外部频率信号

6. 按键说明

1	短按”抬压脚”按键	切换自动抬压功能。	自动抬压脚关闭;前抬;后抬;前后抬。
2	短按”剪线”按键	切换自动剪线功能。	自动剪线关闭;前切;后切;前后切。
3	短按”模式”按键	切换工作模式。	全电脑;半智能;全智能。
4	短按”P”按键	确认作用。	
5	短按”+”按键	主界面下进行速度设置。	

6	短按“-”按键	主界面下进行速度设置。	
7	短按“<”按键	主界面下进行语言设置。	
8	短按“>”按键	主界面下进行机头灯设置。	
9	短按“语音”按键	故障时进行语音播报,无故障时设置开机语音参数。	
10	短按“恢复”按键	执行参数恢复。	
11	长按“抬压脚”按键	进入抬压脚相关联的快捷参数设置。	
12	长按“剪线”按键	进入剪线相关联的快捷参数设置。	
13	长按“模式”按键	进入模式相关联的快捷参数设置。	
14	长按“P”按键	退到主界面，或进行 P 参数。	
15	长按“+”按键	略	
17	长按“-”按键	略	
18	长按“<”按键	略	
19	长按“>”按键	略	
20	长按“语音”按键	设置语音开关。	
21	长按“恢复”按键	参数备份操作。	
22	长按“p”和“抬压脚”	进入技术员参数设置。	
23	长按“p”和“模式”	进入条码序号查看。	
24	长按“p”和“+”	进入系统参数设置。	
25	长按“p”和“-”	进入上针位调整。	
26	长按“p”和“语音”	传感器工厂自动校准。	
27	上电按“模式”	进入电机出工厂学习及针位角度调整。	

D9 AUTOMATIC INDUSTRIAL SEWING MACHINE SERVO CONTROLLER

INSTRUCTION MANUAL BOOK

File name: English installation instructions

version: V1.0

Thanks for choosing our industry sewing machine AC servo system. You can get more knowledge and instructions in reading this manual.

To successfully operate this servo system, please make sure to read this manual completely before any operation.

- The information in this manual is subject to change without notice for the updating of the servo system.
- If you have any question or idea on our products, please don't hesitate to contact with us.

Specification:

Power supply range:	1Phase AC200V~AC240V $\pm$ 10%
Power supply frequency:	50Hz/60Hz
Maximal power consumption:	500W
Motor rated output:	550W
Motor rated rotation speed:	6000rpm
Motor rated torque:	0.6 N·m
Motor maximal torque:	1.8 N·m

Content

1、 Safety caution :.....	- 27 -
1.1 Use range :.....	- 27 -
1.2 Work environment :.....	- 27 -
1.3 NOTES :.....	- 27 -
1.4 Maintenance regulation :.....	- 27 -
1.5 Danger prompt :.....	- 28 -
1.6 Wiring & ground Connection:.....	- 28 -
1.7 Other safety regulations :.....	- 29 -
2、 Regulate the force of front & back pedal :.....	- 29 -
3、 Instruction for upper machine panel :.....	- 30 -
3.1 Icon.....	- 30 -
3.2 The key definitions.....	- 31 -
3.3 The keys operation.....	- 32 -
3.4 The basic function.....	- 37 -
3.5 Indicator lights.....	- 38 -
3.6 Display show.....	- 38 -
3.6.1 Boot display.....	- 38 -
4. Instruction for parameter.....	- 39 -
4.1 List of sewing machine P:.....	- 40 -
5. List of failure.....	- 46 -
5.1 Failure sheet	
6. Button instructions.....	- 46 -

1、 Safety caution :

1.1 Use range :

This servomotor I designed for the industrial sewing machine, if use for any other purpose, please take extreme caution for the user safety.

1.2 Work environment :

1.2.1 Use power voltage indicated on the nameplate of the motor or control box in $\pm 10\%$ Ranges.

1.2.2 To avoid the false operation, please keep the product away from the high electromagnetic machinery or electro pulse generator.

1.2.3 Temperate & humidity :

a. Please operate the motor working at the temperature Form 5°C to 45°C.

b. Please do not work at the direct sun light or outdoor.

c. Don't operate near the heater.

d. Please keep the room humidity in 30%~95% range.

1.2.4 Don't operate near the flammable gas or explosive area.

1.3 NOTES :

1.3.1 Please install the motor & controller correctly according to the user manual.

1.3.2 Please turn off the power and unplug the power line before any installation or adjustment.

1.3.3 Please be away from the running belt wheel and V-belt when fixing power line, the removed distance is at least 3 centimeters.

1.3.4 Please connect the sewing machine, motor and control box to the ground to avoid the static interference and current leakage accident.

1.3.5 Make sure the supply voltage is accorded with voltage which is on control box and motor nameplate within the range of $\pm 15\%$.

1.3.6 For the safety protection, recommend to install the Residual Current Breaker/Relay.

1.3.7 For prevent sudden start cause an accident, please cut off the power when you not in use or leave .

1.4 Maintenance regulation :

1.4.1 Turn off the power before maintenance or repair.

1.4.2 When raising the machine arms, changing the needle or shuttle, or thread through, please make sure that the power is turn off.

1.4.3 High voltage in control box ! After the power is turned off, wait for 5 minutes before opening the control box cover.

1.4.4 Maintenance and repairs must be done by the specially trained personnel.

1.4.5 Maintenance and repair during motor running is absolutely prohibited.

1.4.6 All spare parts for repairment must be approved or supplied by the manufacturer.

1.5 Danger prompt :



This symbol indicates the caution on installation, risks that may cause
Personal injury or risk to the machine.

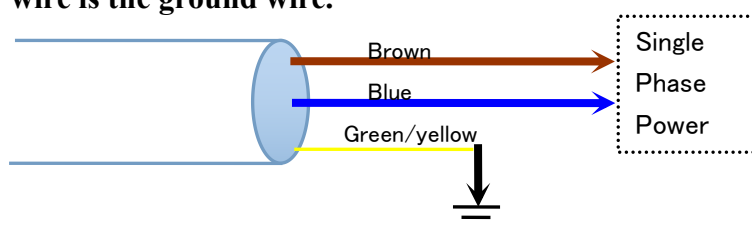


This symbol indicates a high voltage area or electrical risks and warnings.

1.6 Wiring & ground Connection:

1.6.1 Single phase connection

Green/yellow wire is the ground wire.

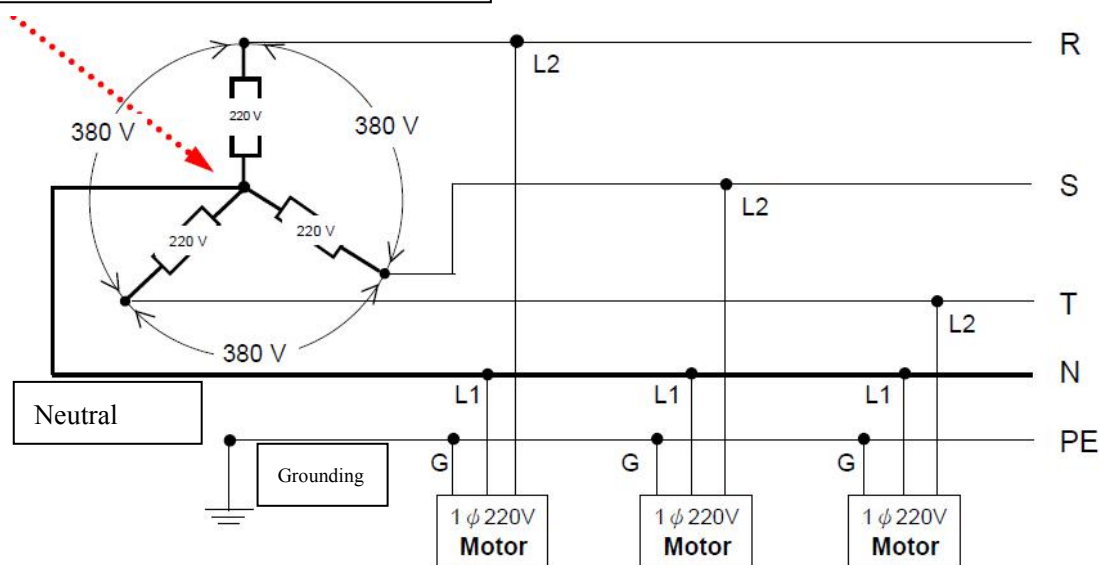


1.6.2 How to connect a 1 Φ / 220 V power from a 3 Φ / 380 V power source

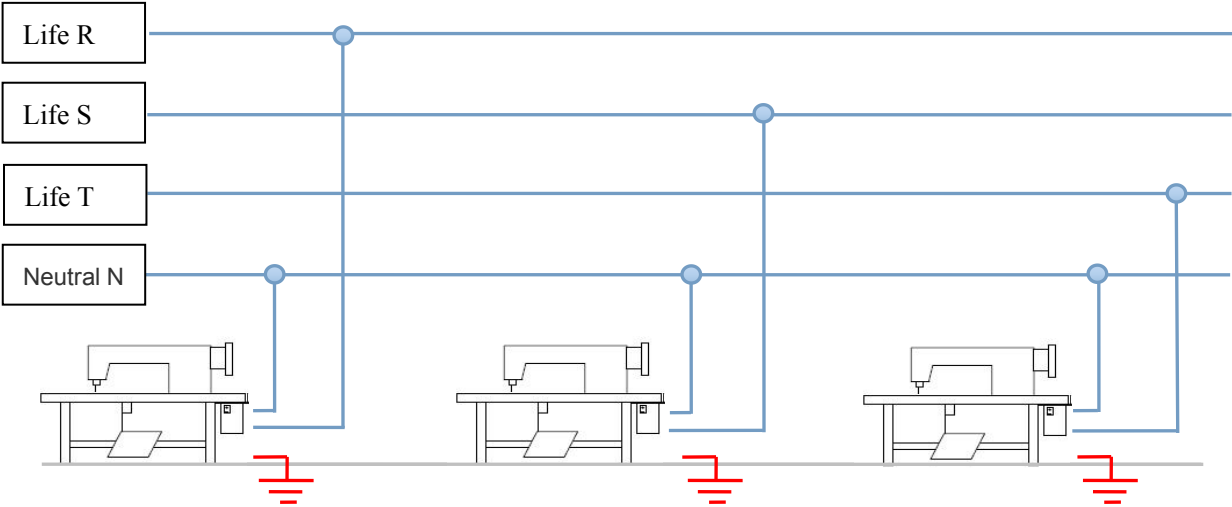


If the system has no Neutral Point, then this servo motor is not suitable for this connection.

Caution: Must have a Neutral point



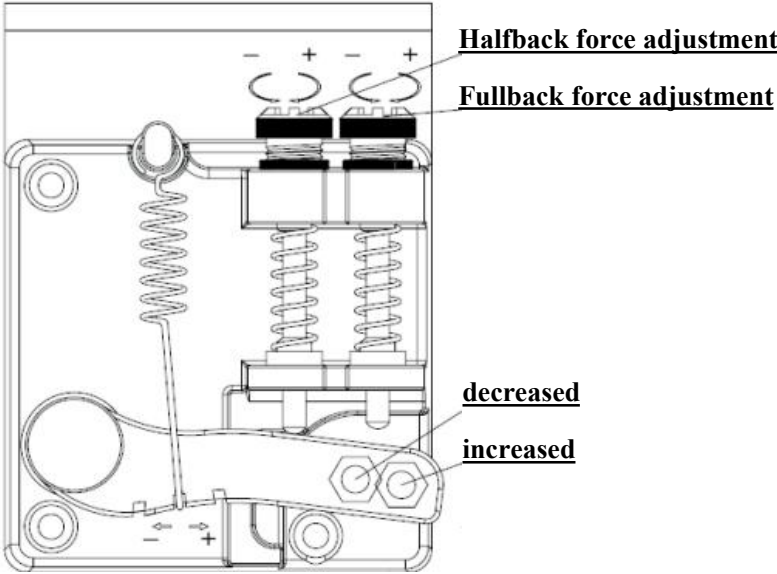
1. 6. 3 The load balance when use a 1phase 220V motor in a 3phases 220V power supply. See the following picture for the load balance:



1.7 Other safety regulations :

- 1.7.1 After the machine is turned on, use low speed to operate first and check the correct rotation direction.
- 1.7.2 Do not touch any moving parts ,During machine operation.
- 1.7.3 All moving parts must use the protective device to avoid the body contact and the objects insertion.
- 1.7.4 Don't operate machine with-out the belt cover or with-out any other safety device.
- 1.7.5 Don't drop the motor or control box on the floor.
- 1.7.6 Do not leave tea or coffee or any other liquid flow into the control box or motor.

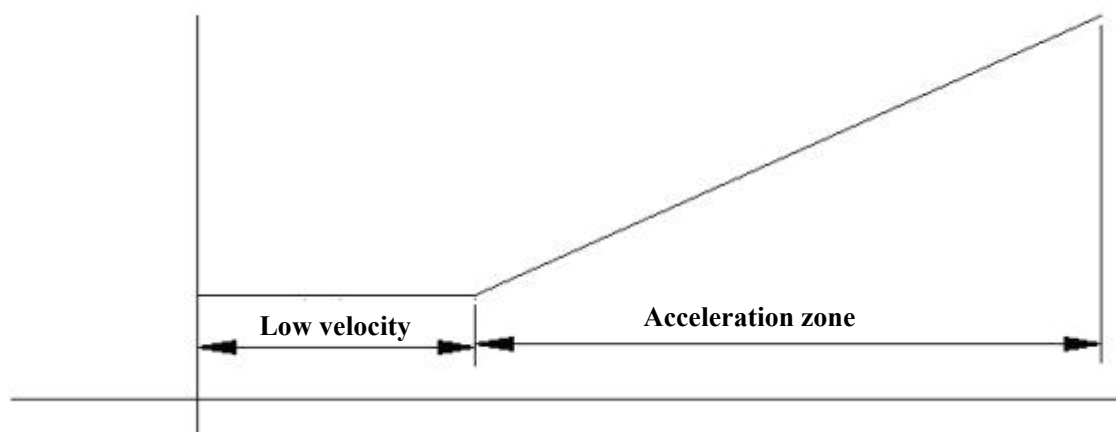
2、 Regulate the force of front & back pedal :



Term of adjustment	Adjustment result
--------------------	-------------------

1	Toeing forward force adjustment	Spring moved to right = force increased Spring mover to left = force decreased
2	Heeling backward force adjustment	Bolt turned up = force decreased Bolt turned down = force increased
3	Treadle stroke adjustment	Rod secured at right = stroke is longer Rod secured at left = stroke is shorter

Notes for pedal slope:

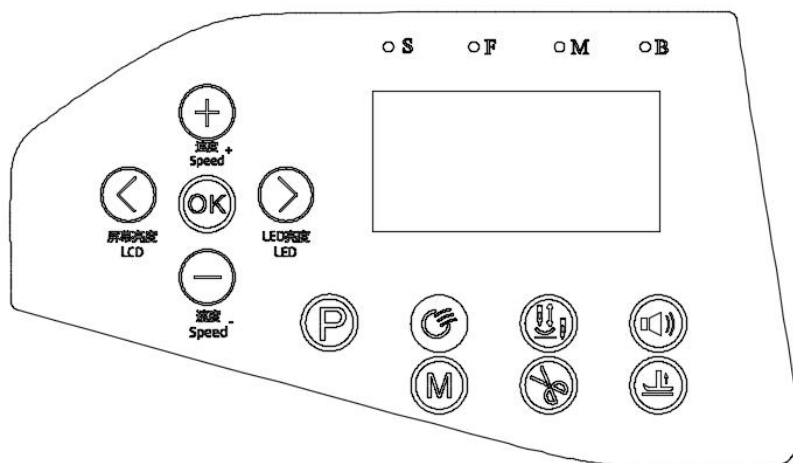


Adjust the pedal slope is to adjust the boundaries of the low velocity and acceleration zone. The pedal slope is, a small the low-speed region will be smaller and then you will feel the acceleration is much smoother when stepping on the pedal. Other wise, low-speed zone is bigger and comparatively you'll feel the acceleration is steeper.

If you need to thread one needle by foot-tread(like supplemental needle), you can set a bigger value to pedal slope and then it is much easier to make one needle.

3、Instruction for upper machine panel :

3.1 Icon



3.2 The key definitions

N0:	Icon	Definitions	Instructions
1		Needle mode	Setting the mode of needle position in sewing
2		Common parameter / Exit	Enter the list of commonly used parameter selections
3		Sound	Language OFF/ON
4		Left-Moving	
5		Right-Moving	Needle mode
6		Confirmation	
7		The plus sign	
8		The minus sign	
9		Automatic/ foot mode selection	
10		Suction mode	
11		Cutting mode re-setting	
12		Lift/tread mode	
13	○ S	Safe on-off lamp	Red
14	○ F	Front sensor signal lamp	Blue
15	○ M	Middle sensor signal lamp	Green
16	○ B	Back sensor signal lamp	Yellow
17		Power lamp	emerald green

3.3 The keys operation

3.3.1 The keys of model

 : Mode adjustment, according to change one time, cycle between artificial, semi automatic, automatic

 : Suction adjustment, according to change one time, cycle between front, rear, both front & rear, long, off.

 : Shear string adjustment, according to change one time, cycle between front, rear, both front & rear, off.

 : Needle position adjustment, according to change one time, cycle between up, down.

3.3.2 Parameter Re-setting for User:

1) Parameter Re-setting

Press the button  into the sewing parameters of password input

interface, display shows:

Parameters
Password
The number of limit

Import the password for a three chance, if three times all errors, will need to re power on to once again.

Press the button     input the true password;

Press the button  into the interface for setting parameter, next time need to input the password again;

Display show:

NO: parameter
Instruction

Through the button     to choose the different parameters, choose the number, press the button  to confirm.

If you need to quit, please press the button  to back to the main interface.

2) Sewing parameter setting of the second regional:

Press the buttons  and  for 3 seconds, into the interface for setting password.

Display show:

Parameters
Password
The number of limit

Input the password for three chances, if three times all errors, will need to

re-power on to once again.

Press the button  input the true password;

Press the button  into the interface for setting parameter, next time need to input the password again.

Display show:

NO: parameter
Instruction

Through the button , choose the different parameters, choose the number, press the button  to firm.

If you need to quit, please press the button  to back to the main interface.

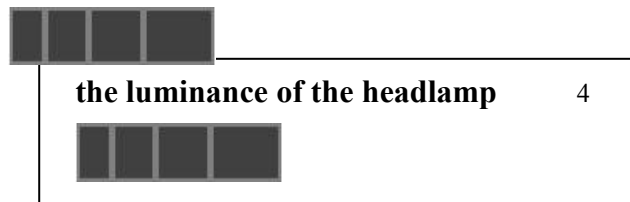
3) Press the button  into the interface for setting the motor highest speed.

Display show:

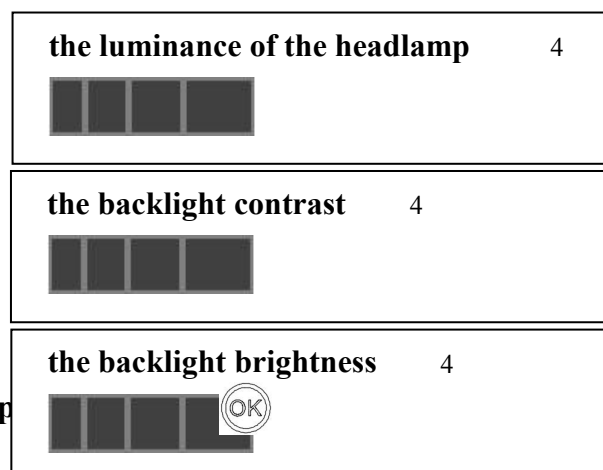
The motor speed
The number for highest speed
The print for speed

Through the button , choose the different parameters, choose the number, press the button  to confirm or press the button  to quit.

4) Press the buttons  and  to set the luminance of the headlamp. Between 0 -6, the grid displays the values



4.1) Under this interface, Press the buttons  and  to set the luminance of the headlamp brightness, backlight contrast, backlight brightness.



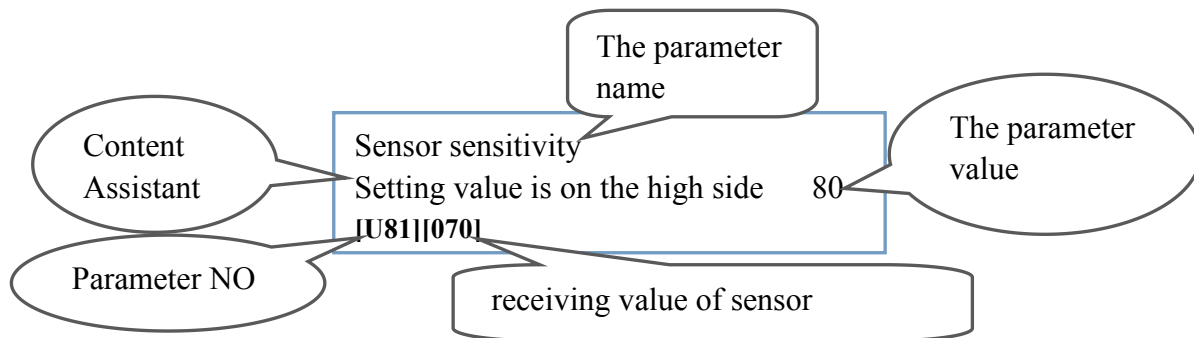
5) Long times p running and the motor stop

LOCK

Display show:

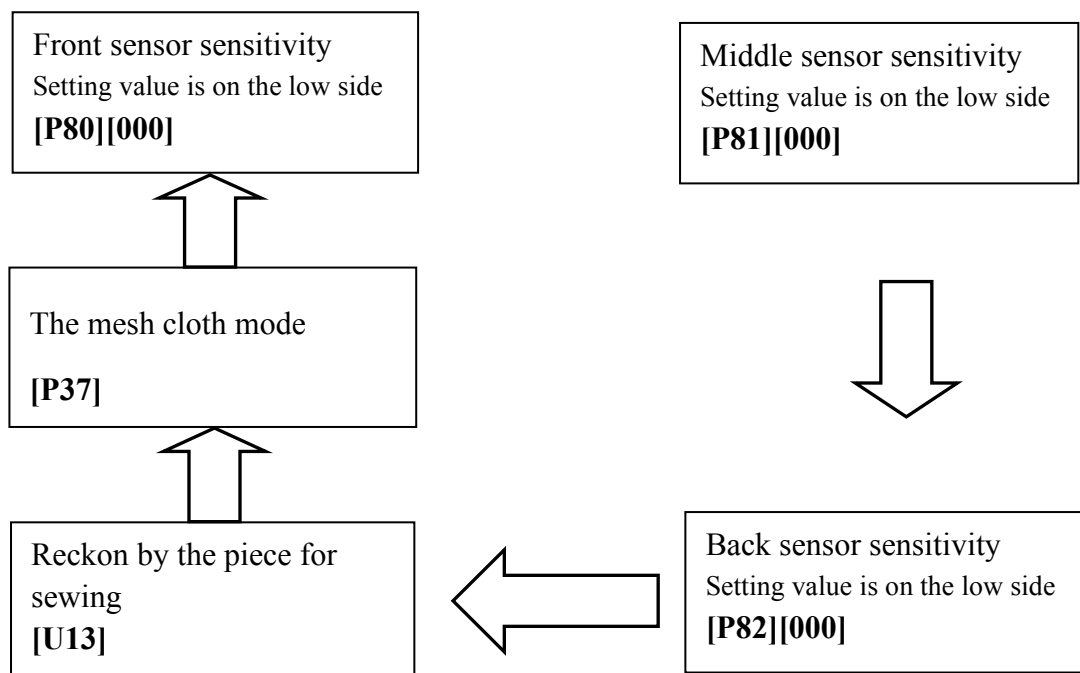
Press the buttons  and  to unlock the upper monitor, back to the main interface.,

6) Long times press the button  to set the shortcut parameters for the Sensor



through the button     Modified the value, press the button  will be save the value, and press the button  to quit.

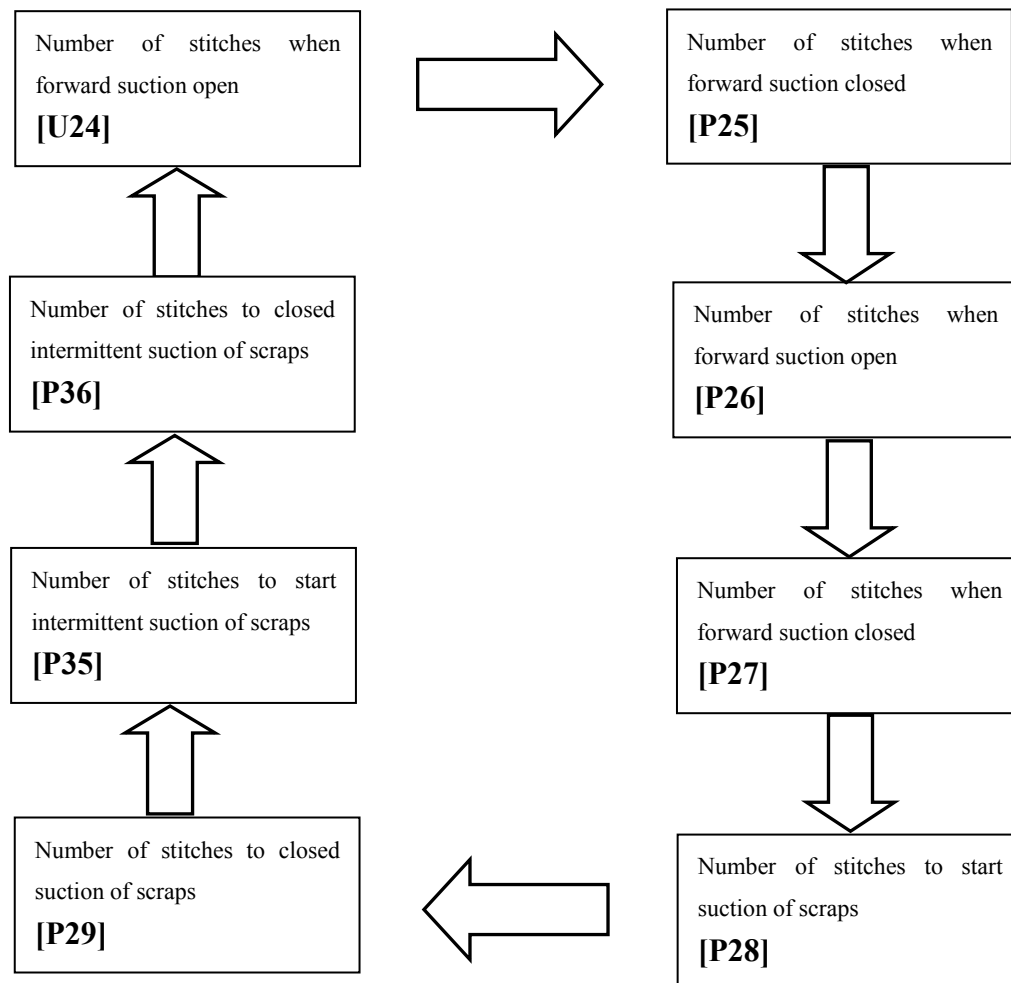
6.1) At the interface of Shortcuts preference, pass the button , switch between sensor sensitivity and sensor response.



through the button     Modified the value, press the button  to save the value, and press the button  to quit.

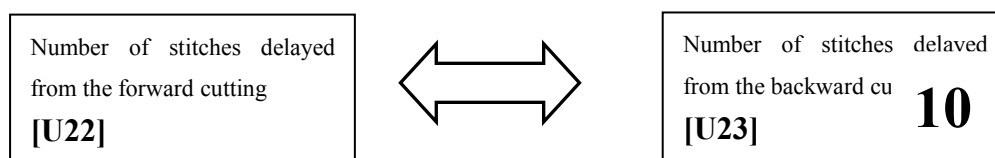


6.2) At the interface of Shortcuts preference , press the buttons  Cycle between Suction adjustment , Number of stitches when forward suction open, Number of stitches when forward suction closed, Number of stitches when backward suction open, Number of stitches when backward suction closed, Number of stitches to start suction of scraps, Number of stitches to closed suction of scraps, Number of stitches to start intermittent suction of scraps, Number of stitches to closed intermittent suction of scraps.



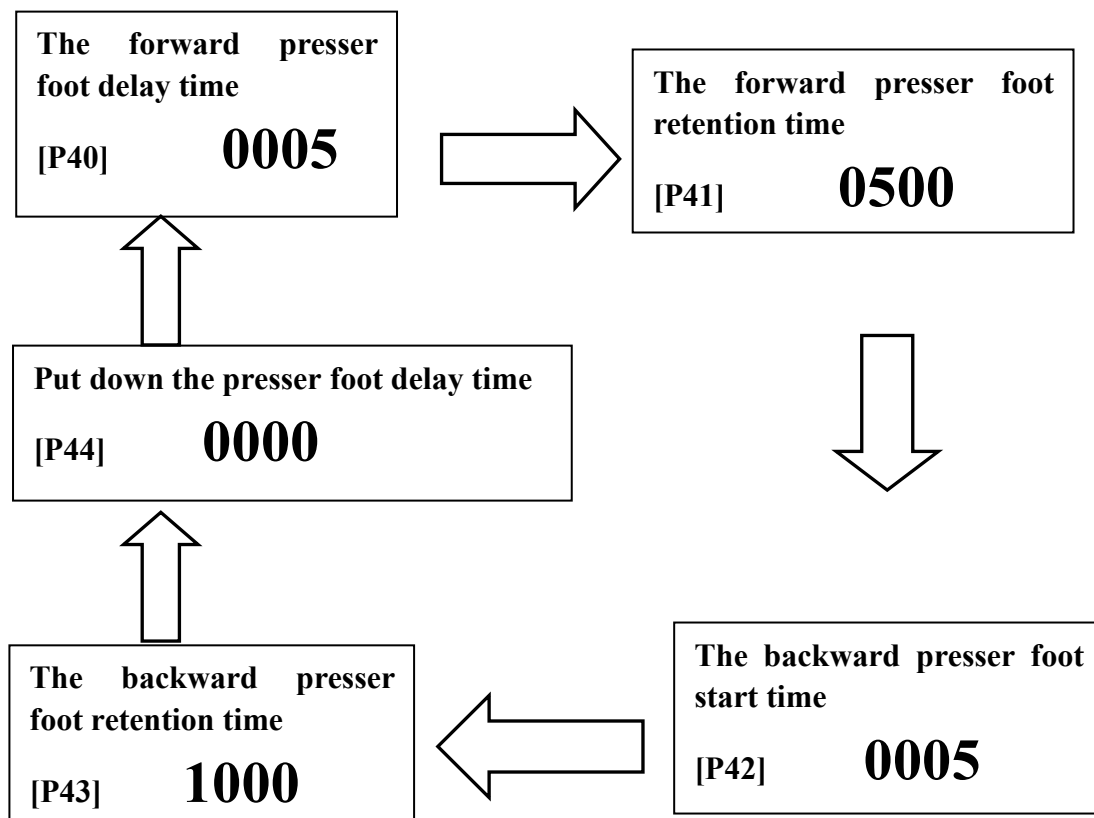
through the button     to Modified the value,press the button  to save the value, and press the button  to quit.

6.3) Shortcut parameter interface , press the buttons  Cycle between the cutting adjustment , Number of stitches delayed from the forward cutting , Number of stitches delayed from the backward cutting.



through the button     to Modified the value, press the button  to save the value, and press the button  to quit.

6.4)Shortcut parameter interface, press the buttons , Cycle between The forward presser foot delay time, The forward presser foot retention time, The backward presser foot start time, The backward presser foot retention time, Put down the presser foot delay time.



through the button     to Modified the value, press the button  to save the value, and press the button  to quit.

7) The parameter of most in use setting:

Press the button  into the interface for The parameter of most in use setting

Display show:

The parameter of most in use 1
The parameter of most in use 2
The parameter of most in use 3

Press the buttons   to choose the parameters settings, press the button  into the interface for the parameter setting;

Long time press the buttons  、  、  into quick select parameters of the corresponding.

3.4 The basic function

3.4.1 The test for infrared sensor

The sensor adopts a reflection type laser receiver.

After installation, enter the parameters setting, press button to adjustment number 1 parameter, choose the sensor, let the numerical value in the "right" range.

(80 the sensitivity of front sensor ; 81 the sensitivity of middle sensor)

Before adjustment, need to lock the upper monitor or adjustment the model at manual or semi-automatic to prevent running during the adjustment period.

3.4.2 Sewing mode

Sewing mode : Automatic, Semi-automatic, Manual.

Automatic: The front sensor checked the signal is have cloth, to running according to the preset, at the same time without stepping control, The speed controller can be used as stop and emergency braking.

Semi-automatic: The front sensor checked the signal is have cloth, need to running the speed controller operation for setting the presser foot mode、 the thread-cut mode、 the breath mode.

Manual: Need to running the speed controller operation, running, no other operation.

At manual mode the board display 'R' in operation', to run the speed controller operation for end.

Press button  to change the mode.

3.4.3 Thread-cut mode

Thread-cut using the external scissors, it's have front and back to cut, at the automatic mode automatic operation according to the cloth. Press the button can opening the mode

Press button  to change the mode for shear line mode.

3.4.4 Automatically breathe

The mode has front and back to breathe, at the automatic mode automatic operation according to the cloth. Press the button can opening the mode

Press button  to change the Suction mode.

3.4.5 Lift\tread mode

The mode has the forward \backward presser foot at the automatic mode automatic operation according to the cloth. Press the button can opening the mode.

Press button  to change the lift\tread mode.

3.5 Indicator lights

○ **S** The light of safe switch: red ,when the winking red light means alarm prompt system for abnormal trouble ; that keep always red light means alarm prompt system loses effect.

○ **F** The light of F-Sensor: blue, when it keeping lighting means has a cloth.

○ **M** The light of M-Sensor: green(*yellow), when it keeping lighting means has a cloth.

○ **B** The light of B-Sensor: yellow, when it keeping lighting means the motor is working.

The light of power: bright green, when keep bright green light means the system is working, that winking bright green means alarm prompt system for abnormal trouble.

3.6 Display show

3.6.1 Boot display

Display show:

Version: (the number of up version) (the number of down version) (Progress bar)

 chart1

Boot display please refer to Chart1 , keep on 2-3 seconds, into the interface of running.

3.6.2 Display show of standby, please refer to chart2

the presser foot: The forward\backward presser foot breath: The forward\backward breath thread-cut: The forward\backward thread-cut working: Semi-automatic
--

 chart 2

3.6.3 Display show of mode, please refer to chart3

Manual
Semi-automatic
Automatic

chart3

3.6.4 Display show of error, please refer to chart4

error: E-12
breath: The forward\backward breath
thread-cut: The forward\backward thread-cut
working: Semi-automatic

chart4

When the electric control and operation panel had error , will show the fault code and simple analytical content. At the same time some button will be locked.

3.6.5 Power off

4. Instruction for parameter

Which the “NO.” has “*” said the revised parameters need to be re power.

(RPM: r/min、ms: millisecond、s: second、h: hour、mm: millimeter)

4.1 List of sewing machine P:

The default password “0000”

*1: The parameter changes will definitely the version. Please check the version carefully.

NO.	Parameter Features	Default cut	Default side suction	Range setting	units	Parameter Explain
P1	Working mode	0	0	0~1		0: Semi-automatic 1: Automatic
P2	Electric eye	1	1	0~1		0: OFF 1: ON
P3	Automatic thread-cut	3	3	0~3		0: OFF 1: The forward cutting 2: The backward cutting 3: The forward \backward cutting
P4	Automatically breathe	1	3	0~3		0: OFF 1: The forward suction 2: The backward suction 3: The forward\back suction
P5	Automatically breathe of scraps	3	3	0~3		0: OFF 1: Continue breathe 2: Intermittent breathe 3 : The forward\back suction
P6	Auto presser foot	0	0	0~3		0: OFF 1: The forward presser foot 2 : The backward presser foot 3: The forward\back presser foot
P7	Loosen thread switch	0	2	0~1		0: OFF 1: ON
P8	Reserved	0	0	0~1		
P9	Semi-automatic	3	3	0~3		0: Ordinary sewing 1: Omit 2: Continuous sewing 3 : Free sewing
P10	Semi-automatic of control	0	0	0~1		0: OFF 1: ON
P11	Motor speed control of lock	0	0	0~1		0: OFF 1: ON
P12	Top speed	6000	6000	200~6000	RPM	
P13	Volume	20	20	0~20		Volume
P14	Operation lock	0	0	0~1		0: OFF 1: ON
P15	Begin sewing speed	5500	5500	200~6000	RPM	
P16	Number of sewing begin	35	5	0~200		
P17	Breathe of Automatically adjust	0	0	0~1		0: OFF 1: ON
P18	Halfway breathe	0	0	0~2		0: OFF 1: Shot time breathe 2: Long time breathe
P19	The number of Intermittent breathe open	25	25	0~1000		

P20	The number of Intermittent breathe close	25	25	0~1000		
P21	Number of stitches between the 2 photocells	50	55	0~99		
P22	Number of stitches delayed from the forward cutting	3	3	0~99		
P23	Number of stitches delayed from the backward cutting	6	6	0~99		
P24	Number of stitches when forward suction open	1	1	0~99		
P25	Number of stitches when forward suction closed	1	18	0~99		
P26	Number of stitches when forward suction open	12	2	0~99		
P27	Number of stitches when forward suction closed	300	900	100~9999		
P28	Number of stitches to start suction of scraps	1	0	0~99		
P29	Number of stitches to closed suction of scraps	1	0	0~99		
P30	Number of stitches to start loose the thread	0	6	0~99		
P31	Number of stitches to closed loose the thread	200	500	0~50		
P32	Number of stitches to runing loose the thread	5	15	0~99		
P33	The speed of loose the thread	5000	500	200~6000		
P34	Number of stitches to continue send the cloth	0	0	0~99		
P35	Number of stitches to start intermittent	25	25	2~99		

	suction of scraps					
P36	Number of stitches to closed intermittent suction of scraps	25	25	2~99		
P37	The mesh cloth mode	0	0	0~1		
P38	Automatically stop the machine	1	1	0~2		0: OFF 1: ON 2: Auto
P39	Number of stitches delayed to stop the machine	25	35	5~200		
P40	Time delayed by the forward presser foot	5	5	5~6000		
P41	The stay time of the forward presser foot	500	500	5~6000		
P42	The stay time of the backward presser foot	5	5	5~6000		
P43	Keep time of the backward presser foot	1000	1000	0~9999		
P44	Number of stitches delayed to stop the machine putting down the presser foot	0	0	0~1000		
P45	The stay time of halfway intermittent suction of scraps	350	350	50~9999		
P46	The stay time of the cutter	20	20	15~9999		
P47	The time of the backward feet suction	500	500	50~9999		
P48	The time of the backward feet thread-cut	50	120	0~5000		
P49	The time of artificial suction	120	120	0~5000		
P50	The time of artificial thread-cut	60	220	0~5000		
P51	The backward feed suction switch	0	0	0~7		0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on

P52	The backward feed thread-cut switch	0	4	0~7	0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P53	Artificial suction switch	7	7	0~7	0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P54	Manual thread-cut switch	7	7	0~7	0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P55	Manual thread-cut effectively	0	2	0~2	0 all runing;1 motor stop ;2 motor running; 3 motor stop or without cloth
P56	Manual thread-cut effectively	2	2	0~2	0 all runing;1 motor stop ;2 motor running; 3 motor stop or without cloth
P57	The backward foot and thread-cut effectively	0	0	0~2	0 all runing;1 motor stop ;2 motor running; 3 motor stop or without cloth
P58	The backward foot and loose thread effectively	0	0	0~2	0 all runing;1 motor stop ;2 motor running; 3 motor stop or without cloth
P59	The switch of backward foot and loose thread	4	0	0~7	0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P60	Manual loose thread switch	7	7	0~7	0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic

						on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P61	Side suction cut drive	0	1	0~3		0: OFF 1: Front 2: Back 3: Front/ Back
P62	The time of start for cut	10	5	0~99		
P63	The time of the electricity is turn on for cut	25	25	0~99		
P64	The time of the electricity is turn off for cut	0	5	0~99		
P65	Reserved	1000	500	0~5000		
P66	Reserved	5	5	0~99		
P67	Reserved	15	15	0~99		
P68	Reserved	0	1	0		
P69	Reserved	0	0	0		
P70	Reserved	0	0	0		
P71	Reserved	0	0	0		
P72	Reserved	0	0	0		
P73	Reserved	0	0	0		
P74	Reserved	0	0	0		
P75	Cloth type	0	0	0~1		
P76	Close the electricity eye	0	0	0~6		
P77	Response time of the forward passageway	50	50	0~4920		
P78	Response time of the middle passageway	10	10	0~4920		
P79	Response time of the backward passageway	10	10	0~4920		
P80	Responsiveness of the forward passageway	65	65	0~99		
P81	Responsiveness of the middle passageway	65	65	0~99		
P82	Responsiveness of the backward passageway	65	65	0~99		
P83	Response value of forward passageway	50	50	5~120		

P84	Response value of middle passageway	50	50	5~120		
P85	Response value of backward passageway	50	50	5~120		
P86	Safe switch	5	5	0~7		0 OFF;1 Manual on;2 Semi-automatic on;3 Automatic on;4 Manual\Semi-automatic on;5 Semi-automatic\Automatic on;6 Manual\ Automatic on;7 Manual\Semi-automatic\ Automatic on
P87		1	0			
P88		1	0			
P89	The protect time of the presser foot	30	30	0~30		
P90	The time of interface recovery	300	300	0~9999		0: OFF 1~9999: 5~9999S
P91	Backlight contrast	3	3	0~6		
P92	Brightness of the back light	6	6	0~6		
P93	Brightness of the header light	4	4	0~6		
P94	Password	0	0	0~9999		
P95	Factory Reset	0	0	0~9999		
P96	Language	0	0	0~2		0: Chinese 1: English
P97	Version 1	0	0	0~9999		
P98	Version 2	0	0	0~9999		
P99	Version 3	0	0	0~9999		

5. List of failure

Error Code	Cause of the Problem	Removal of fault
E1	System error	First check the motor if something stuck in and then re-power-on the machine. If there are still errors, please call for customer service.
E2	System over voltage	Please check the AC power. (Too high) If the AC Power is higher than 265V (AC, RMS) , PLS. Shut Down A.S.A.P, No Turn the Power on Until the AC Power is in the right Tolerance of 220V±15%. Warning: the power related parts in PCBA will be damaged under this high voltage for a long time.
E3	System in LOW voltage	Please check the AC power. (Too LOW) If the AC Power is lower than 160V (AC RMS), PLS. Shut Down, No Turn the Power on Until the AC Power is in the right Tolerance. 220V±15%.
E4	Encoder error	Please check the signal cable of encoder plug in good situation.
E5	System error	Re-Power-on, if there are still errors, please call for customer service.
E6	System error	Re-Power-on, if there are still errors, please call for customer service.
E7	Motor phase failure	Bad connection at the motor connector. PLS. Check the Motor Power cable plugs In good situation.
E8	Motor stuck in	Shut Down the System, Check if anything else stuck in the motor pulley, or rotates not smoothly.
E9	Motor Over-Load	Shut Down the System, Check if anything stuck in the motor pulley, or rotates not smoothly. Or, Sewing material is too thick to sew.
E10	Encoder Error (electrical angle error)	Bad connection at the motor encoder cable connector. PLS. Check the Motor Encoder cable plugs in good situation.
E12	Paddle related error	Please check the connection.
E13	Paddle is pressed on when system power on.	Please check the paddle.
E17	Solenoid Over-Current	please check the related circuit is shorted or damaged.
E15 E18	Brake error	PLS. Check if the Brake Resistor NO connected or is too loosed.
E19 、 E20 、 E21	Positioning sensor error	Motor is still running, but there are no needle counting, no output of needle position sensor and no output of the signal of solenoid. Please check if the connection of hand wheel sensor is in good condition and make sure nothing stuck in the machine.
E22	Operation panel linked to main board interface had a communication error.	Please check if the operation panel in bad connection or is too loosed.
E23	EEPROM error	Re-Power-on, if there are still errors, please call for customer service.
		
E30	Motor power line shedding or loosening	
E33	Interface board	Re-Power-on, if there are still errors, please call for

	communication failure	customer service.
E34	Interface board verification failure	Re-Power-on, if there are still errors, please call for customer service.
E35	Press foot safety switch to disconnect.	Please check the safety switch of press foot.
E36	Sewing platform safety switch to disconnect	Please check the safety switch of Sewing platform .
E37	Operation failure	urn on power in full automatic mode detected sensing anomalies
E38	Version query restriction	Please contact the after-sales service
E39	Operation panel linked to main board interface had a EEPROM error.	Re-Power-on, if there are still errors, please call for customer service.
E40	Over current of electromagnet (overlock machine) .	Electromagnet malfunction, check if electromagnet is damaged or short circuit.
E41	Needle safety switch	
E42	Sensor error	Sensor receives external frequency signal

6. Button Instructions

1	Short press the button “ foot lifter”	To change automatic lifter function	Auto lifter closed;front lift;back lift;front and back lift.
2	Short press the button “ thread trimmer”	To change automatic thread trimmer	Auto trimmer closed;front trimmer; back trimmer; front and back trimmer.
3	Short press the button “ mode”	To change the working mode	Full automatic;semi automatic ;Manual\semi-automatic。
4	Short press the button “ P”	To confirm	
5	Short press the button “ +”	Main interface speed adjustment	
6	Short press the button “ -”	Main interface speed adjustment	
7	Short press the button “ <”	Main interface Language Select	
8	Short press the button “ >”	Main interface machine led light mode setting	
9	Short press the button “ sound”	Voice announcement when in fault, or announce the parameter setting s	
10	Short press the button “recovery”	Execute the parameter of recovery	

11	Long press the button “ presser foot lifter”	To set the quick parameter of presser foot lifter	
12	Long press the button “ thread trimmer”	To set the quick parameter of thread trimmer	
13	Long press the button “ mode”	To set the quick parameter of mode	
14	Long press the button “ P”	To set the quick parameter of P or back to the main interface	
15	Long press the button “ +”	略	
17	Long press the button “ -”	略	
18	Long press the button “ <”	略	
19	Long press the button “ >”	略	
20	Long press the button “ sound”	To set the sound switch	
21	Long press the button “ recovery”	To copy the parameter	
22	Long press the button “ P” and “Presser foot”	To enter the technician parameter setting mode	
23	Long press the button “ P” and “mode”	Enter and check the code and number	
24	Long press the button “ P” and “+”	Enter to the parameter setting	
25	Long press the button “ P” and “ -”	Enter to adjust the upper needle position	
26	Long press the button “ P” and “sound”	Sensor automatic adjustment	
27			