


Facility Integral employ directionsV1.1

1. Safety instruction

Please read the operation manual and related sewing machinery datasheet carefully before correct use.





- 1.1** (1) Power voltage and frequency: please refer to motor and control box nameplate.
 (2) Interference from electromagnetic wave: please keep far away strong magnetic or high radiation environment in order to avoid obstructions and make to misoperation.
 (3) Grounding: to avoid the noise obstructions or leakage of electricity accident (including sewing machine, motor, control box and positioner).
- 1.2** Please make sure power off at least 1min and then can open control box cover, because there are dangerous high voltage.
- 1.3** Please turn off the power while repairing or wearing needle in order to protect operator's safety.
- 1.4**  Used where potential dangers exist.

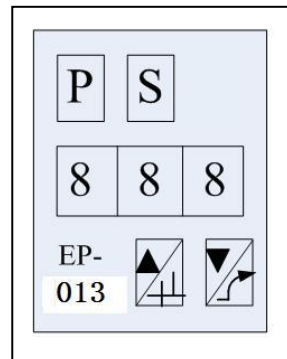
 Used where high voltage and electric danger exist.

- 1.5** Product warranty period of one year on condition that this machine is operated correctly and no man-made damage.



2. Instructions for Operation Box

2.1 key functional specification

No	Keys	Functions
1		Function keys
2		Save button
3		Add key / needle up and down bit composite key
4		Minus key / soft-start composite key.



2.2 Monitor mode

Standby, press the "S" key for 2 seconds into the monitoring status, press   to change monitor serial number, monitor value can not be modified. Specific display content:

show frame numbers	Item Name	unit	show frame numbers	Item Name	unit
SPD	speed	(*10) rpm	DJ	Angle	limit
CUR	Current	0.01A	VER	version	/
UDC	Voltage	V			

Press the S key to enter to a specific value, press P to exit and return to the standby state.

3. Parameter list of lockstitch sewing machine

No	Items	Settings range	Default	Remarks
1	highest speed of pedal	200~5000rpm	3700	indicates the range from 20 to 500, while the real range is 200 to 5000
2	Soft Start	1~10	2	needle number of soft start
3	soft start speed 1	200~2000rpm	600	
4	soft start speed 2	200~2000rpm	1000	
5	soft start speed 3	200~2000rpm	1500	
8	Simple sewing mode Settings	0~1	0	0: unavailable 1: available
9	Power on and positioning	0~1	0	0: unavailable 1: available
10	signal mode for turn/lift switch	0~1	0	0: always open 1: always close
11	Pedal curve selection	0~2	0	0: normal 1: Slow acceleration 2: Quick acceleration
20	return to factory-set parameter	0~2	0	0: Do not restore 1: restore general parameters 2: restore advanced
*21	highest speed of sewing	2000~5000rpm	4000	
*22	Afterburner low speed gear selection	0~15	0	0: no afterburner 1~15: too thick afterburner stalls
*23	Reference position adjustment	0~359	350	The smallest unit 1°
*25	The neutral position of the pedal	-15~+15	0	
*26	Pedal travel upon start	10~50	25	
*27	Pedal travel upon acceleration	10~100	50	
*28	Pedal travel at highest rotation speed	10~150	110	
*29	Pedal travel upon presser foot lift	-99~+10	-30	
*31	The aging rate	300~5000rpm	3500	
*32	Aging run-time	20~600	30	The smallest unit 0.1s
*33	aging pause time	2~60	20	The smallest unit 0.1s

Note: 1 to 11 General parameters, more than 21 For the advanced parameters only into the advanced parameters, P20 can only Be set to 2, P20 recovery is completed automatically reset to 0.

4. Error Code Table

Codes	Contents	Checking and treatment	Codes	Contents	Checking and treatment
E1	Over-current of hardware	Check if it is well earthed Whether the damage to the device driver	E10	Low voltage runtime	Check if it is well earthed. Current detection loop system is working properly
E2	Whether the damage to the device driver	Check if it is well earthed Current detection loop system is working properly	E11	HALLA signal loss	Check the motor signal cord
E3	System voltage is too high	System into line voltage is too high	E12	Motor overload	Check the sewing machine is not jammed. Actual operating excessively frequent acceleration and deceleration
E4	System voltage is too low	System into line voltage is too low	E13	EEPROM error	seek technical support
E5	High voltage runtime	System into line voltage is too high	E14	Current detection of non-normal	seek technical support
E6	Needle stop signal failure	Check if the needle connector is loose	E15	Pedal zero point exceeds the range	Pedal zero point exceeds the setting range
E7	Motor HALL Signal failure	Check the motor connector for poor connection.	E16	OZ circuit of non-normal	seek technical support
E8	Locked rotor failure of motor	Check if the motor wire is well connected, and if it is overloaded	E17	Motor reverse	Check motor phase sequence and signal lines
E9	Over-speed failure	Check if the motor wire connection is correct	E18	motor failure angle	Check motor phase sequence and signal lines Check whether the motor is stuck

Note: If the above according to check the project cannot rule out fault, please seek technical support.

5. ACCESSORY

No.	Product name	Amount	Product specification	Confirm	Remarks
1	Electric control box	1			
2	Power cord	1			
3	pedal	1	PL-302		
4	Ball section connecting rod	1			
5	screw	3	M4×20		
6	screw	3	M5×25		
7	The instructions	1			

简易一体式使用说明书 V1.1

1. 安全上的注意事项

使用前请详细阅读本技术资料与所搭配的缝制机械说明书，配合正确使用。

1.1 (1) 电源电压与工作频率：请遵照马达与控制箱铭牌所标之规格。

(2) 电磁波干扰：请远离高频磁波机器或电波发射器等，以免所产生的电磁波干扰驱动装置因而发生错误动作。


(3) 接地：为防止杂讯干扰或漏电事故，请做好接地工程（包括缝纫机、马达、控制箱、定位器）。

1.2 拆卸马达或控制箱时，勿带电拔插；控制箱里面有危险高压电，所以关闭电源后要等 1 分钟以上方可打开控制箱盖。

1.3 为保证人身安全，请在维修机械或进行穿针作业时关闭电源。

1.4  这个标示符号表示机器安装时，如有错误恐会伤害到人体或机器会受到损坏。

所以机器方面有危险性的地方会有此标志。

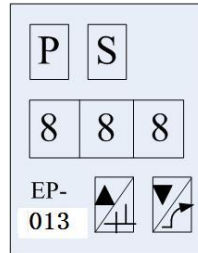
 这个标志符号表示有高压电等，电气方面有危险性的地方会有此标志。

1.5 本装置保证在正常工作情况且无人为失误的操作下，保修期为一年。


2. 操作面板使用说明

2.1 按键功能说明

序号	按键	描述
1		功能键。
2		储存键。
3		加键/上下针位复合键。
4		减键/软启动复合键。



2.2 监控模式

待机状态下，长按 S 键 2 秒，进入到监控状态，按  键进行变更监控序号，监控值不能修改。具体显示内容有：

显示序号	项目名称	单位	显示序号	项目名称	单位
SPD	速度	(*10) rpm	DJ	角度	度
CUR	电流	0.01A	VER	版本	/
UDC	电压	V			

按 S 键，进入到具体值，按 P 键退出，返回待机状态。

3. 系统参数表：

参数号	参数定义	设定范围	默认值	备注
1	缝纫速度	200~5000rpm	3700	(显示范围 20~500, 实际代表 200~5000, 下同)
2	软启动针数	1~10	2	
3	软启动速度 1	200~2000rpm	600	
4	软启动速度 2	200~2000rpm	1000	
5	软启动速度 3	200~2000rpm	1500	
8	简易缝纫模式设定	0~1	0	0: 无效 1: 有效
9	上电定位选择	0~1	0	0: 不找上针位 1: 自动找上针位
10	翻抬开关选择	0~1	0	0: 常开 1: 常闭
11	踏板曲线选择	0~2	0	0: 正常 1: 加速慢 2: 加速快
20	恢复出厂参数	0~2	0	0: 不恢复 1: 恢复普通参数 2: 恢复所有参数
*21	最高缝纫速度	2000~5000rpm	4000rpm	
*22	低速加力档位选择	0~15	0	0: 无加力 1~15: 过厚加力档位
*23	基准位置调整	0~359	350	最小单位 1 度
*25	模拟踏板中立位置	-15~+15	0	
*26	开始运行的踏板行程	10~50	25	
*27	开始加速的踏板行程	10~100	50	
*28	运行高速的踏板行程	10~150	110	
*29	后踩动作的踏板行程	-99~-10	-30	
*31	老化速度	300~5000rpm	3500rpm	
*32	老化运行时间	20~600	30	最小单位 0.1s
*33	老化停顿时间	2~60	20	最小单位 0.1s

注：1~11 为普通参数，21 以上为高级参数，只有进入到高级参数中，P20 才可以设定为 2，P20 恢复完毕自动归 0。

4. 故障代码

故障显示	故障内容	检查项目、处理	故障显示	故障内容	检查项目、处理
E1	硬件过流	接地是否良好 驱动器件是否损坏	E10	运行时欠电压	接地是否良好 电流采样回路是否正常
E2	软件过流	接地是否良好 电流采样回路是否正常	E11	HALLA 信号丢失	检查电机信号线插头
E3	停机时过电压	系统进线电压是否过高	E12	电机超负荷	检查机头是否卡住 实际操作加减速过度频繁
E4	停机时欠电压	系统进线电压是否过低	E13	EEPROM 错误	寻求技术支持
E5	运行时过电压	系统进线电压是否过高	E14	电流检测回路故障	寻求技术支持
E6	停针信号故障	检查停针信号及插头	E15	踏板零位检测超限	踏板零位超过设定范围
E7	电机 HALL 信号故障	电机插头是否接触良好	E16	OZ 回路故障	寻求技术支持
E8	电机堵转故障	检查电机线是否插好 负载是否过大	E17	电机反转	检查电机相序及信号线
E9	超速故障 (超过设定机型的最高转速报错)	检查电机信号线插头	E18	电机角度测试故障	检查电机相序及信号线 检查电机是否被卡住

注：若以上故障按检查项目不能排除，请寻求技术支持。

5. 随机附件

序号	产品名称	数量	规格	确认	备注
1	电控箱	1			
2	电源线	1			
3	踏板	1	PL-302		
4	球接连杆	1			
5	电控箱固定螺钉	3	M4×20		内六角圆柱头螺钉
6	踏板固定螺钉	3	M5×25		外六角法兰自攻螺钉
7	说明书	1			