

QD9622系列绷缝说明书2018.05版

△安全指示

No. 10404008

在安装或使用本产品前，使用者必须详细阅读本操作手册。

本产品须由受过正确训练的人员来安装或操作。安装作业时必须关闭所有电源，切记不可带电操作。

3) 所有标有△符号的指示，必须特别注意并按照说明书上的执行，以免造成不必要的损害。

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) 在连接电源线时，必须确定工作电压低于 AC 250V，且符合本产品标识中规定的额定电压值。

※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，将可能烧损电控箱内器件，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 0℃ 以下的场所操作。

7) 请不要在暖气（电热器）旁、有露水的场所及在相对湿度 10% 以下或 90% 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) 请注意所有电源线、信号线、接地线等接线时不要受压或过度扭曲，以确保使用安全。

10) 电源线的接地端须以适当大小的导线和接头连接到生产工厂的系统地线，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) 在安装完成第一次开电后，先关闭切缝功能以低速操作缝纫机并检查转动方向是否正确、运转是否稳定。

13) 在进行以下操作前，请先关闭所有电源：

1. 在控制箱与马达上插拔任何连接插头时。

2. 穿针线时。

3. 翻抬缝纫机机头时。

4. 修理或做任何机械上的调整时。

5. 机器闲置不用时。

14) 修理或高层次的保养工作，仅能由受过训练的机电技师来执行。

所有维修用的零件，须由本公司提供认可，方可使用。

15) 使用本产品请远离高频电磁波和电波发射器等，以免所产生的电磁波干扰伺服驱动装置而发生误动作。

16) 请不要以不适当物体来敲击或撞击本产品及各装置。

保修期限
本产品保修期限为购买日期起一年内或出厂月份起两年内。

保修内容
本产品在正常情况使用且无人为操作失误的前提下，于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、将产品移做其它用途、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、异常电压及其它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）

1. 按键显示及操作说明

功能	按键	车缝动作说明
功能参数编辑键		进入或退出功能参数的编辑。
参数查看保存键		对所选参数号内容进行查看和保存：选择好参数号后按此键可以进行查看和修改操作，修改参数值后按此键则退出并保存参数。
加键/加速键		增大参数/提高运行速度
减键/减速键		减小参数/降低运行速度
机头灯亮度键		点击调节机头灯的亮度。
慢速起缝键		设置使用或取消慢速起缝功能。
自动抬压脚键		点击切换自动抬压脚关闭、中途停车抬压脚、切线后抬压脚、中途停车与切线后抬压脚。
吸风键		设置使用或取消吸风功能。
停针定位选择键		点击切换上、下停针位。
扫线键		设置使用或取消扫线功能。
上刀切线键		设置使用或取消上刀切线功能。
下刀切线键		设置使用或取消下刀切线和上刀切线功能。

2. 参数表

参数项	中文说明	范围	初始值	内容值名称说明与备注
P01	最高转速（rpm）	100-6000	4500	车缝时的最高转速设置
P02	加速曲线调整（%）	10-100	80	控速器爬升斜率设置 斜率值愈大，速度愈陡；斜率值愈小，速度愈慢
P03	针停定位选择	UP/DN	DN	UP：上停针；DN：下停针
P07	慢速起缝速度（rpm）	200-1500	1000	
P08	慢速起缝针数（针）	1-99	2	
P14	慢速启动	ON/OFF	OFF	
P15	机头灯亮度	0-4	3	
P21	踏板前踩位置	30-1000	500	
P22	踏板回中位置	30-1000	420	
P23	踏板抬压脚位置	30-1000	280	
P24	踏板切线位置	30-1000	130	
P29	切线停车力度	1-45	20	
P36	扫线开关	ON/OFF	OFF	
P37	上刀切线开关	ON/OFF	ON	
P38	下刀切线开关	ON/OFF	ON	
P39	中途停车自动抬压脚	UP/DN	DN	UP：开启；DN：关闭
P40	切线后自动抬压脚	UP/DN	DN	UP：开启；DN：关闭
P41	计数器显示	0-9999		车缝完成件数显示；长按减号键可计数清零；
P42	信息显示			N01 电控版本号 N02 面板版本号 N03 车缝转速 N04 脚踏板 AD N05 上定位角度 N06 下定位角度 N07 母线电压 AD
P43	马达转动方向设置	CCW/CW	CCW	CW：顺时针方向；CCW：逆时针方向
P44	正常停车力度	1-45	25	
P46	切线后提针开关	ON/OFF	OFF	
P47	切线后提针角度	50-200	160	
P48	低速（定位速度）（rpm）	100-500	200	最低速度限制调整
P50	抬压脚全额输出的工作时间（ms）	10-990	150	
P51	压脚出力的周期信号（%）	1-50	30	压脚动作时，以周期性省电输出，避免电磁铁发热
P52	延迟马达启动，保护压脚下放时间（ms）	10-990	150	踩下时延迟启动时间，以配合自动抬压脚放下的确认
P53	抬压脚功能选择	0-2	1	0：关闭； 1：反踏和半反踏都有抬压脚； 2：半反踏无抬压脚，反踏有抬压脚；
P54	下切线动作时间（ms）	10-990	100	下切线时序所需的动作时间

P56	开机自动找定位	0-2	0	0：始终不找上定位 1：始终找上定位 2：若电机已经处于上定位时不再找上定位
P57	抬压脚保护时间（s）	1-120	10	抬压脚保持时间后强制关闭
P58	上定位调整	0-1439	40	上定位调整，数值减少时会提前停针，数值增加时会延迟停针
P59	下定位调整	0-1439	750	下定位调整，数值减少时会提前停针，数值增加时会延迟停针
P60	测试速度（rpm）	100-6000	4000	设置测试速度
P61	A 项测试	ON/OFF	OFF	持续运行测试模式
P62	B 项测试	ON/OFF	OFF	全功能启停测试模式
P63	C 项测试	ON/OFF	OFF	无定位、无功能启停测试模式
P64	测试运行时间	1-250	50	
P65	测试停止时间	1-250	50	
P66	机头保护开关	0-2	0	0：不检测；1：检测零信号；2：检测正信号
P67	切线保护开关	ON/OFF	ON	
P70	机型选择			
P71	压脚释放缓冲冲空比(%)	0-50	0	压脚释放时的力度调整
P72	上定位快捷调整	0-1439		调整上停针位，显示的数值会随手轮位置变化而变化，按“S”键可保存当前位置（数值）为上停针位
P73	下定位快捷调整	0-1439		调整下停针位，显示的数值会随手轮位置变化而变化，按“S”键可保存当前位置（数值）为下停针位
P87	上切线回程延时（ms）	10-990	50	
P89	交流过压值设置	500-1023	880	
P92	校正电机角度			按停针定位选择键读取电机角度，出厂已设置，请勿随意更改（随意更改会损坏电机）
P93	半反踏延迟时间（ms）	10-900	150	
P105	电动/气动选择	0-1	0	0：电动；1：气动
P108	吸气选择	ON/OFF	ON	
P109	上切线前延时（ms）	5-990	55	找到上定位后进入上切线动作前的间隔时间
P110	下切线回程时间（ms）	60-990	60	
P112	下切线出力的动作时间（ms）	10-990	100	
P113	下切线出力的周期信号（%）	0-100	100	下切线出力时的力度调整

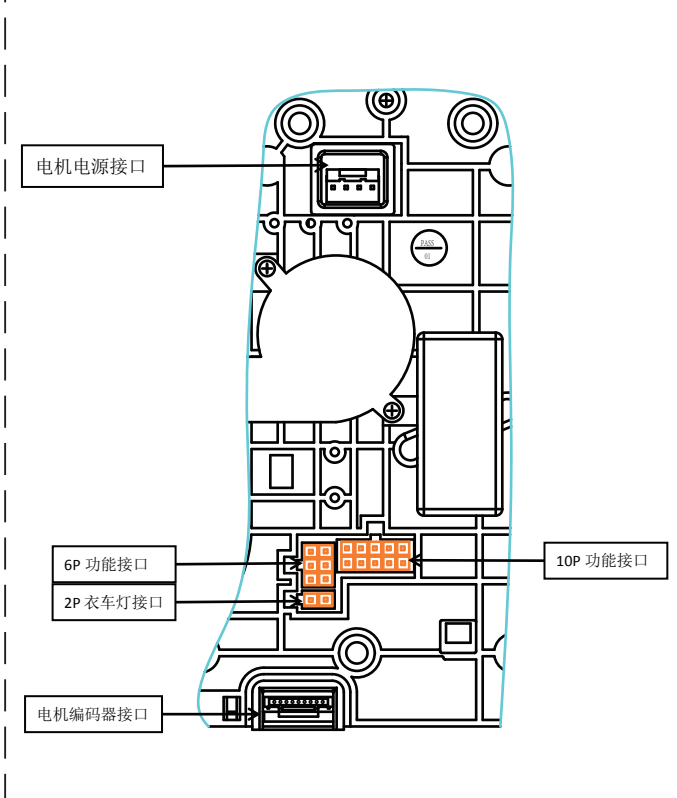
P117	压脚释放缓冲延时（ms）	0-990	20	
P119	电磁铁过流保护	0-1	1	0：停用；1：启用

注：参数初始值仅供参考，实际参数值以实物为准。

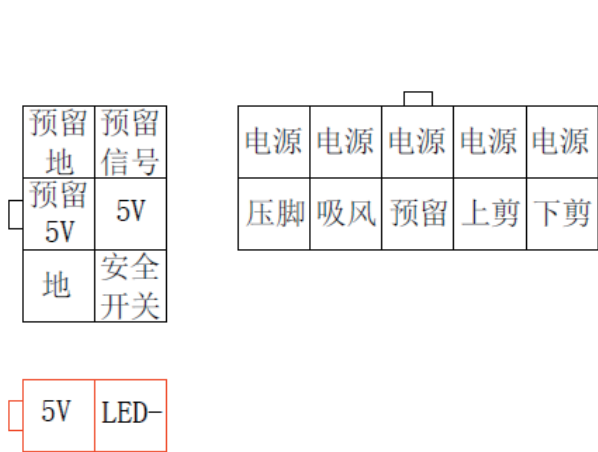
3. 错误代码表

错误码	问题描述	解决措施
E01	超电压	关闭系统电源，检测供应电源电压是否正确。（或是否超过使用规定的额定电压）。 若正确，请更换控制箱并通知售后服务。
E02	低电压	关闭系统电源，检测供应电源电压是否正确。（或是否低于使用规定的额定电压）。 若正确，请更换控制箱并通知售后服务。
E03	CPU 通信异常	关闭系统电源，检查控制面板的连线是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控制箱并通知售后服务。
E05	控速器接触异常	关闭系统电源，检查控速器接头是否松动或脱落，将其恢复正常后重启系统。若仍不能正常工作，请更换控速器并通知售后服务。
E07	电机堵转	转动机头手轮观察是否卡住。如卡住则先排除机械故障。 如转动正常，检查电机编码器接头和电机电源线接头是否松动。如有松动请修正。 如接触良好，检查供应电源电压是否异常或转速设置过高。如有请调整。 若仍不能正常工作，请更换控制箱并通知售后服务。
E10	电磁铁过流保护	关闭系统电源，检查电磁铁（电磁阀）是否损坏或短路。
E09 E11	定位信号异常	关闭系统电源，检查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，请更换电机并通知售后服务。
E14	编码器信号异常	关闭系统电源，检查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，请更换电机并通知售后服务。
E15	电力模块不正常过流保护	关闭系统电源，再重新开启。若仍不能正常工作，请更换控制箱并通知售后服务。
E16	切线开关没到正确位置	关闭系统电源，检查切线机构是否回到正确位置。
E17	机头保护开关没到正确位置	关闭系统电源，检查机头是否掀开，控制箱内滚珠开关是否移位或损坏。
E20	电机启动失败（电角度错误）	关闭系统电源，检查电机编码器接口和电机电源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，请更换控制箱并通知售后服务。

4. 端口示意图



4.1 功能端口说明



Safety Instruction

- 1) Users are required to read the operation manual completely and carefully before installation or operation.
- 2) The product should be installed and pre-operated by well trained persons
- 3) All the instruction marked with sign , must be observed or executed; otherwise, bodily injuries might occur.
- 4) For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection
- 5) When connecting power supply cords to power sources, it is necessary to make sure that the power voltage is lower than 250V AC and matches the rated voltage indicated on the motor's name plate.
- ※Attention: If the Control Box is AC 220V system, please don't connect the Control Box to AC 380V power outlet. Otherwise, the error will occur and motor will not work. If that happens, please turn off the power immediately and check the power voltage. Continue supply 380V power over 5 minutes might damage the fuse F2, burst the electrolytic capacitors and the power module U14 of the main board and even might endanger the person safety.
- 6) Please don't operate in direct sun light, outdoors area and where the room temperature is over 45℃ or below 0℃.
- 7) Please avoid operating near the heater at dew area or at the humidity below 10% or above 95%.
- 8) Please don't operate in area with heavy dust, corrosive substance or volatile gas.
- 9) Avoid power cord being applied by heavy objects or excessive force, or over bend.
- 10) The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
- 11) All the moving portions must be prevented to be exposed by the parts provided.
- 12) Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
- 13) Turn off the power before the following operation:
1. Connecting or disconnecting any connectors on the control box or motor.
 2. Threading needle.
 3. Raising the machine arm.
 4. Repairing or doing any mechanical adjustment.
 5. Machine is out of work.
- 14) Repairing and high level maintenance work should only be done by electronic technicians with appropriate training.
- 15) All the spare parts for repairing work must be provided or approved by the manufacturer.
- 16) Don't use any objects to hit or ram the product.
- Guarantee Time
- Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.
- Warranty Detail
- Any trouble found within warranty period under normal operation, it will be repaired free of charge. However, maintenance cost will be charged in the following cases even if within warranty period:
1. Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.
 2. Damage by fire, Earth quake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.
 3. Dropping after purchasing or damage in transportation by customer himself or by customer's shipping agency.
- * Note: We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this all a failsafe device. (Such as residual current breaker).

1. Button Display and Operaing Instructions

Name	Key	Indicate
Function Parameter Edit		Press this key to enter or exit function parameter edit mode.
Setting Parameter Check And Save		For the content of the selected parameters check and save: after select parameter press this key to check and modify operation, after modified parameter value press this key to exit and save the parameter.
Parameter Increase/ Speed Increase		Increase the parameter/ Increase the sewing speed
Parameter Decrease/ Speed Decrease		Decrease the parameter/ Decrease the sewing speed
LED brightness adjustment		Press this key to adjust LED brightness.
Slow Launch Setting		Set used or cancelled slow launch function.
Automatic Presser Foot Lifting Setting		Click to shift auto presser foot lift OFF; intermediate stop presser foot lift, presser foot lift after trimming, presser foot lift after intermediate stop and trimming
Auto-suction		Set used or cancelled auto-suction function.
Needle Stop Position Selection		Set needle stop position.
Wiper Key		Set used or cancelled wiper function.
Upper knife trimming		Set used or cancelled upper knife trimming function.
Lower knife trimming		Set used or cancelled lower knife trimming function.

2 User Parameter

No.	Items	Range	Default	Description
P01	Maximum Sewing Speed (rpm)	100-6000	4500	Maximum speed of machine sewing
P02	Set accelerated curve (%)	10-100	80	Set the acceleration slope
P03	Needle UP/ DOWN	UP/DN	DN	UP: Needle Stops at Up Position DN: Needle Stops at Down Position
P07	Soft Start Speed (rpm)	200-1500	1000	
P08	Stitch Numbers for Soft Start	1-99	2	
P14	Slow start function selection	ON/OFF	OFF	
P15	Mending stitch mode	0-4	3	
P21	The position of the pedal for running	30-1000	500	
P22	The position of the pedal for the stop	30-1000	420	
P23	The position of the pedal for lifting presser foot	30-1000	280	
P24	The position of the pedal for thread trimming	30-500	130	
P29	The rate of thread trimming stop	1-45	20	
P36	Thread wiping switch selection	ON/OFF	OFF	
P37	Upper knife trimming output function setting	ON/OFF	ON	
P38	Lower knife trimming output function setting	ON/OFF	ON	
P39	Automatic presser foot lifting when pause function selection	UP/DN	DN	UP: ON DN: OFF
P40	Automatic presser foot lifting after trimming function selection	UP/DN	DN	UP: ON DN: OFF
P41	Counter display	0-9999		Display the quantity of finished sewing piece
P42	Information Display			N01 The control system version number N02 The panel version number N03 Speed N04 The pedal AD N05 The mechanical angle(up position) N06 The mechanical angle(down position) N07 Bushar voltage AD
P43	Direction of Motor Rotation	CCW/CW	CCW	CW: Clockwise CCW: Counter Clockwise
P44	The rate of normal stop	1-45	25	
P46	Motor stop with a reverse angle after trimming function	ON/OFF	OFF	

P47	Adjust the reverse angle when motor stop after trimming (rpm)	50-200	160	
P48	The minimum speed Limit (rpm)	100-500	200	Adjust the minimum speed.
P50	Foot lifter operation time to full output (ms)	10-990	150	
P51	Presser foot lifter operation duty cycle (%)	1-50	30	Presser foot lifter operate in duty cycle to save electricity and protect the electromagnet from over-heat.
P52	Motor starting delay time (ms)	10-990	150	Delay the start time, with automatic presser foot down.
P53	Lifting presser foot function selection	0-2	1	0: OFF 1: ON 2: Half back pedaling without function, back pedaling with function
P54	Lower knife trimming action time (ms)	10-990	100	Lower knife trimming sequence time
P55	Upper knife trimming action time (ms)	10-990	45	Upper knife trimming sequence time
P56	Power on and positioning	0-2	0	0: always not to find the up needle position 1: always to find the up needle position 2: If the motor is not into the up needle position, it will find the up needle position
P57	Hold time of presser foot lifter (s)	1-120	10	Forced shut-down after hold time.
P58	Up needle position adjustment	0-1439	40	Up Position Adjustment The needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P59	Down needle position adjustment	0-1439	750	Down Position Adjustment The needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P60	Testing Speed (rpm)	100-6000	4000	Setting testing speed.
P61	Testing A	ON/OFF	OFF	Continuous running testing.
P62	Testing B	ON/OFF	OFF	Start and stop testing with all functions.
P63	Testing C	ON/OFF	OFF	Start and stop testing without all function.
P64	Running Time of Testing	1-250	50	
P65	Stop Time of Testing	1-250	50	
P66	Machine protection switch selection	0-2	0	0: Disable 1: Testing zero signal 2: Testing positive signal

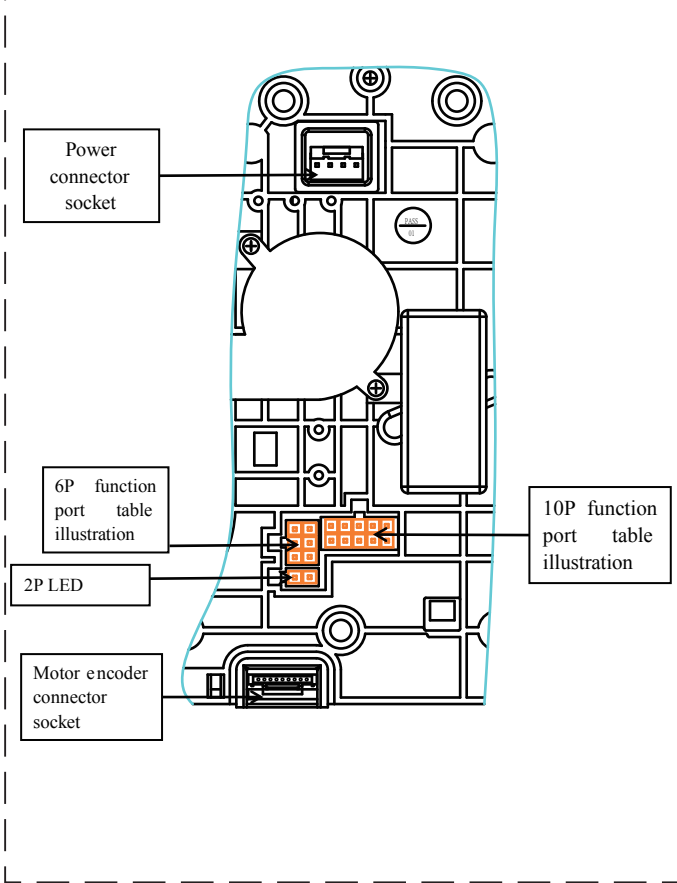
P67	Thread trimming protection switch selection	ON/OFF	ON	
P70	The factory type selection			
P71	Presser foot release operation duty cycle (%)	0-50	0	The buffer force of presser foot release operation.
P72	Up needle position adjustment	0-1439		Hand rotation manual to the appropriate position, press S key to save
P73	Down needle position adjustment	0-1439		Hand rotation manual to the appropriate position, press S key to save
P87	Upper knife trimming back delay times (ms)	10-990	50	
P89	Exchange overvoltage settings	500-1023	880	
P92	Correct the electrical angle of motor			Reading the initial Angle of encoder, the factory default was set, please do not change the values (parameter value cannot be changed manually, random change it will result the control box and motor abnormal or damaged).
P93	The delay time of the half back pedaling function(ms)	10-900	150	
P105	Electric/ pneumatic selection	0-1	0	0: Electric 1: Pneumatic
P108	Interlock suction function selection	ON/OFF	ON	
P109	The delay time before upper knife trimming(ms)	5-990	55	The interval time of upper knife trimming after finding up needle stop position
P110	Lower knife trimming back delay times(ms)	60-990	60	
P112	Lower knife trimming output action time(ms)	10-990	100	
P113	Periodic signal of lower knife trimming output(%)	0-100	100	Force adjustment of lower knife trimming output
P117	The delay time of the presser foot release damping force (ms)	0-990	20	
P119	Electromagnet overcurrent protection selection	0-1	1	0: OFF 1: ON

Note: the parameter initial value is for reference only, the actual parameter value is based on the real thing.

3 Error Code List

Error Code	Problem description	Measure
E01	Over-voltage	Turn off the machine, check the power supply voltage (Or whether exceed the rated voltage of use). If there are still errors, please replace the control box and call for customer service.
E02	Low-voltage	Turn off the machine, check the power supply voltage (Or whether under the rated voltage of use). If there are still errors, please replace the control box and call for customer service.
E03	CPU communication error	Turn off the machine, please check if the operation panel in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E05	Pedal connection error	Turn off the machine, please check if the pedal in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E07	Motor locked-rotor error	Turn the machine handwheel, check if it is stuck. If it is stuck, you have to rule out the mechanical failure. If turn normal, check if the encoder and motor in bad connection or is too loose. If yes, please correct. If connection well, check if the power supply voltage is abnormal or sewing speed is too high. If yes, please adjust. If there are still errors, please replace the control box and call for customer service.
E10	Solenoid over-current	Turn off the machine, please check the related circuit is shorted or damaged.
E09 E11	Positioning signal error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E14	Encoder error	Turn off the machine, please check if the encoder in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.
E15	Power supply module abnormal over-current	Turn off the machine, then turn on again. If there are still errors, please replace the control box and call for customer service.
E16	Thread trimming switch is not in the correct position	Turn off the machine, check if the thread trimming switch back to the correct position.
E17	Machine protection switch is not in the correct position	Turn off the machine, check if the machine is turn over, or the mercury switch is shifted or damaged.
E20	Motor failed to start(Electrical angle error)	Turn off the machine, please check if the encoder and motor in bad connection or is too loose. To get it right and turn on. If there are still errors, please replace the control box and call for customer service.

4 Port Diagram



4.1 Function Port Description

