QD623/QD629 系列说明书 2016.04 版

⚠安全指示

1） 在安装或使用本产品前，使用者必须详细阅读本操作手册。
2） 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，先关闭切线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)

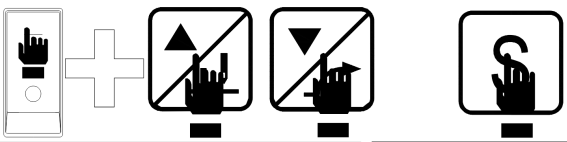
1.1　　按键显示及操作说明

1.1　按键说明

进入参数区功能键		一般模式下按【P】键进入用户参数模式 按住【P】键开机进入技术员参数模式
进入和确定存储保存键		进入参数项及其内容值如经调整变更后，需按下【S】键予以保存确认。注：参数保存直接按【S】保存。
上调节键		1、参数选择区内参数项递增键 2、参数内容区内设定数值递增键 3、停针位选择快捷键
下调节键		1、参数选择区内参数项递减键 2、参数内容区内设定数值递减键 3、慢速起缝选择快捷键

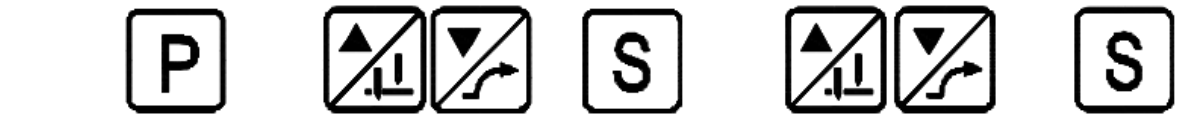
1.2 操作说明

1.2　恢复出厂设置



按住上、下调节键同时开机　　再按【S】键确认、关机重启

1.3　进入用户模式及修改保存



一般模式下按下【P】键进入用户参数	按上、下调节键进行修改参数项	按【S】键确认进入相应参数项	按上、下调节键进行修改参数值	按【S】键确认保存

1.4　进入技术员模式及修改保存

按住【P】键开机进入技术员参数	按上、下调节键进行修改参数项	按【S】键确认进入相应参数项	按上、下调节键进行修改参数值	按【S】键确认保存

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
在正常模式下按[P]				
P01	最高转速（r/pm ）	200-2200	2200	车缝时的最高转速设定
P02	加速曲线调整（%）	1-100	80	控速器爬升斜率设定 斜率值愈大，速度愈陡；斜率值愈小，速度愈慢
P03	停针位选择	0-1	1	0：上停针；1：下停针
P07	慢速起缝速度（r/pm ）	200-1500	400	慢速起缝时的速度设定
P08	慢速起缝针数（针）	1-100	2	慢速起缝时的针数设定，每一单位代表半针
P14	慢速启动	0-1	0	1：慢速启动功能开启 0：慢速启动功能关闭
P15	补针方式	0-4	2	0：半针；1：一针；2：预留 3：连续补一针；4:连续补针，快速停车
P24	脚踏板反踏点电压	30-1000	110	
P30	厚料加力力度	0-100	10	
P42	信息显示	N01-N07		N01 电控版本号序列号 N02 选针盒版本号 N03 转速 N04 脚踏板 AD N05 上定位机械角度 N06 下定位机械角度 N07 母线电压 AD
P43	马达转动方向设定（正反转）	0-1	1	1：顺时针方向　0：逆时针方向
按住[P]键开机				
P44	刹车力度	1-50	18	机器停车时的力度选择。
P48	低速(定位速度)(r/pm ）	100-500	210	定位速度设定
P56	开电后自动找上定位	0-2	1	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（仅限于有磁钢电机）
P58	上定位调整	0-1440	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	0-1440	650	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（r/pm ）	200-5000	2200	设置测试速度
P61	A 项测试	0-1	0	A 项测试选项，设定后将按【P60.】所设定之速度持续运行
P62	B 项测试	0-1	0	B 项测试选项，设定后将按【P60.】所设定之速度执行启动-车缝-停车-剪线的循环
P63	C 项测试	0-1	0	C 项测试选项，设定后将按【P60.】所设定之速度执行无定位动能的启动-车缝-停车的循环
P64	测试 B、C 导通时间	1-250	20	B、C 项测试中，设置导通时间
P65	测试 B、C 停车时间	1-250	20	B、C 项测试中，设置停车时间
P66	机头保护开关检测	0-2	1	0：不检测　1：检测零信号　2：检测正信号

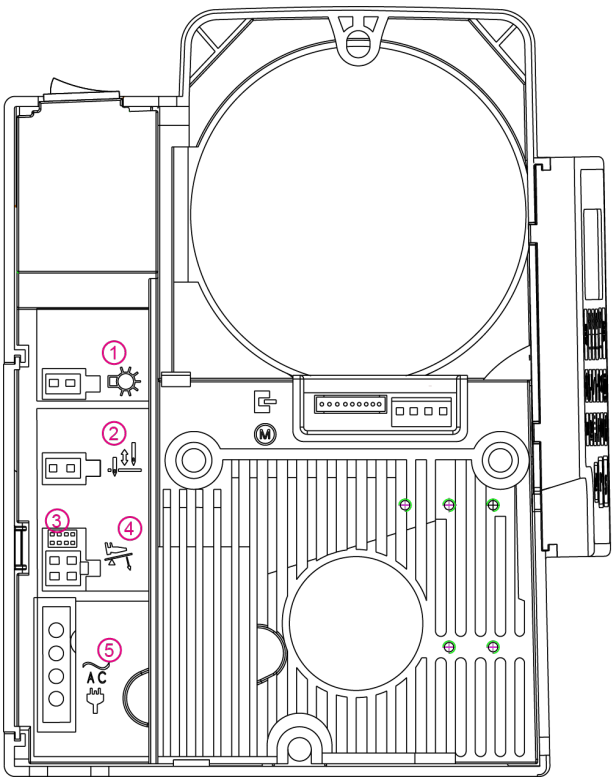
参数项	中文说明	范围	初始值	内容值名称说明与备注
P67	剪线保护开关检测	0-1	0	0：不检测　　1：检测
按住[P]、[S]键同时开机				
P70	出厂机型选择	1-10		
P72	上停针位校正	0-1440		调整上停针位，显示的数值会随手轮位置变化而变化，按“S”键可保存当前位置（数值）为上停针位
P73	下停针位校正	0-1440		调整下停针位，显示的数值会随手轮位置变化而变化，按“S”键可保存当前位置（数值）为下停针位
P84	厚料开始加力角度	0-359	9	
P85	厚料结束加力角度	0-359	57	
P92	编码器绝对位置校正		160	读取编码器起始角度，出厂已设置，请勿随意更改（参数值不可手动更改，随意更改会导致控制箱、电机出现异常或损坏）

3.错误代码表

错误码	内容	对策
E01	1）电源 ON 时，主电压检测过高 2）供应电源电压过高时	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厂方。
E02	1）电源 ON 时，主电压检测过低 2）供应电源电压过低时	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厂方。
E03	控制面板于 CPU 传输通信异常	关闭系统电源，检查控制面板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厂方。
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厂方。
E07	a)马达插头配线接触不良导致不转 b)车头机构死锁或马达皮带异物卷入卡死。 c)加工物过厚，马达扭力不足无法贯穿。 d 模块驱动出力异常	转动机头电机手轮观察是否卡住。如卡住则先排除机头机械故障。 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。 如正常，请更换控制箱并通知厂方。
E09 E11	电源开启即自动找上定位 ,但未检测到上定位信号。	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，请更换电机编码器或控制箱并通知厂方。
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，请更换电机编码器或控制箱并通知厂方。

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厂方。
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。 如需暂时关闭此保护，可将 P66 项参数值设为 0。
E20	开机电机启动失败	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厂方。

4.端口示意图



① 衣车灯
② 提针补针
③ 烧录口
④ 脚踏板
⑤ 电源开关

⚠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 250 VAC 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.

6. Don ' t operate in direct sun light，outdoors area and where the room temperature is over 45°C or below 5°C.
7. Please avoid operating near the heater at dew area or at the humidity below 30% or above 95%.
8. 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：
    a) Connecting or disconnecting any connectors on the control box or motor.
    b) Threading needle.
    c) Raising the machine head.
    d) Repairing or doing any mechanical adjustment.
    e) Machines idling.
14. Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
14. All the spare parts for repair must be provided or approved by the manufacturer.
15. Don't use any objects or force 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 product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate area must guarantee the good earth and it's also recommended to install a failsafe device.(Such as residual current breaker)

1. Button Displays and operating instructions

1.1 Key Description

Function key enter parameter area		Under normal mode, press the [P] key to enter the user parameter mode Press and hold the [P] key to boot into parameter mode Technician
Enter and determine \ save button		Enter parameter values such items and their contents change after adjustment, need to press the [S] key to save the confirmation. Note: The parameters are saved directly by the [S] key.
On the adjustment key		1. Choose the region parameter items incrementing key 2. Parameter setting value incrementing key 3. Select the shortcut needle position
Under the adjustment key		1. Choose the region parameter items of diminishing key 2.Is decremented key parameter settings 3. Slow play seam selection shortcuts

2 User Parameter &Technician Parameter

Parameter	Parameter Function	Range	Default	Description
In the normal screen, press [P]				
P01	Maximum Sewing Speed (r/S)	100-3700	3700	Maximum speed of machine sewing
P02	Speed Curve Adjustment (%)	1-100	80	The Lager the value, the faster to increase speed
P03	Needle UP/ DOWN	UP/DN	DN	UP: Needle Stops at Up Position DN: Needle Stops at Down Position
P07	Soft Start Speed (r/S)	200-1500	400	Soft Start Speed Adjustment
P08	Stitch Numbers for Soft Start	0-99	2	Soft Start Stitches Setting (one unit = half stitch)
P14	Soft Start	ON/OFF	ON	ON: Slow start feature is turned on. OFF: Slow start function off.
P15	Make up pin mode	0-3	0	0: Semi-pin ; 1: a pin 2 : Continuous filling half needle 3 : Continuous injection
P24	Foot pedal reverse voltage	30-500	120	
P30	Thick material angle	0-100	0	
P42	Information Display	N01-N07		NO1 Electrically controlled version serial numbers NO2 Selected needle cassette version NO3 Speed NO4 Pedals AD, NO5 Positioning angle (0--359), NO6 Under the positioning angle

Parameter	Parameter Function	Range	Default	Description
				NO7 Bus voltage AD
P43	Setting Direction of Motor Rotation	CCW/CW	CCW	CW：Clockwise CCW： Counter Clockwise
Press and hold the [P] key to boot				
P44	Brake force	1-50	16	Efforts to stop the machine when selecting
P48	Low (Positioning) Speed （r/S ）	100-500	210	Setting Positioning Speed
P56	Needles Goes Up Automatically as Power turned on	0-2	1	0: always not to find a position 1：: always looking for positioning 2 ： If the motor is positioned on the no longer find location (only with magnet motor)
P58	Up 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 Position Adjustment	0-1439	720	Down Position Adjustment The needle will advance stop when the value decreased. The needle will delay stop when the value increased.
P60	Testing Speed（r/S ）	100-3700	2000	Setting testing speed.
P61	Testing A	ON/OFF	OFF	Option of Testing A, after setting press 【060. TV】to set the speed keep running.
P62	Testing B	ON/OFF	OFF	Option of Testing B, after setting press 【060. TV】to set the speed execute the cycle of Start – Sewing –Stop - Trimming
P63	Testing C	ON/OFF	OFF	Option of Testing C, after setting press 【060. TV】to set the speed execute the cycle of Start – Sewing –Stop without positioning function
P64	Running Time of Testing B and C	1-250	20	Setting running time of testing B and C
P65	Stop Time of Testing B and C	1-250	20	Setting stop time of testing B and C
P66	Machine Protection Switch Testing	0-2	1	0：Disable， 1：Testing zero signal， 2：Testing positive signal
P67	Trimming Protection Switch Testing	ON/OFF	OFF	OFF：Disable ON：Enable
Press and hold the [P], [S] key while the boot				
P70	The factory Type Selection		27	
P72	The needle position correction	0-1439	0	Hand rotation manual to the appropriate position, press S key to save

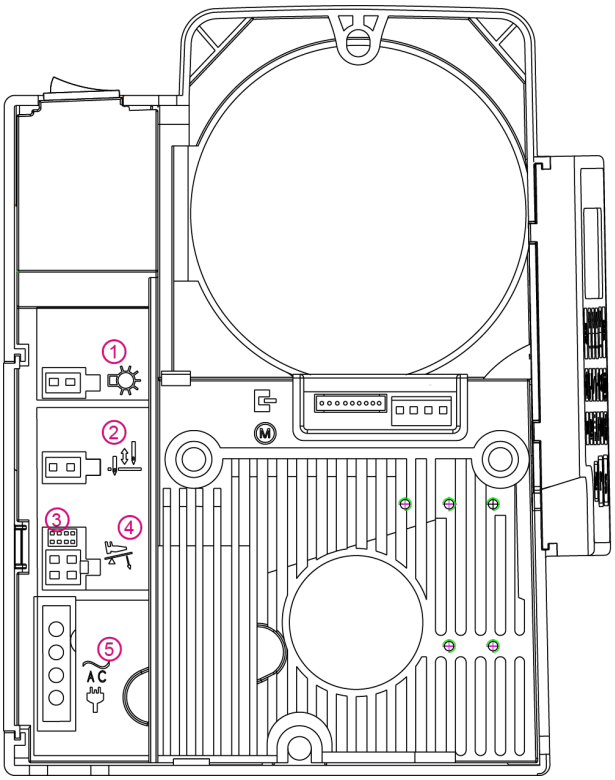
Parameter	Parameter Function	Range	Default	Description
P73	Under needle position correction	0-1439	0	Hand rotation manual to the appropriate position, press S key to save
P84	Thick start angle	0-330	9	
P85	The thick end angle	0-330	57	
P92	Encoder start angle		160	View manual 1.5 chapter

3 Error Code List

Error Code	Problem	Strategies
E01	1) Power ON, the main voltage detection is too high 2) When the supply voltage is too high	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage specified in use.) If correct, please replace the control box and inform the factory
E02	1) Power ON, the main voltage detection is too high 2) When the supply voltage is too high	Turn off the system power supply, and detect whether the supply voltage is correct. (Or exceed the rated voltage specified in use.) If correct, please replace the control box and inform the factory
E03	Operation panel and CPU transmission communication exception	Turn off the system power, check the operation panel interface is loose If contact is good, please change the operation panel. If it is not operated, the control box is damaged, please change
E05	Control of the contact of the device	Off the system power supply, check and control the connector is loose or fall off, Will resume normal after the restart system If you still can not work normally, please replace the speed controller and notify the manufacturer.
E07	a) Motor plug wiring contact is not transferred b) Lock head or motor belt foreign body in the card die c) The machine is too thick, the motor torque is not enough. d) Module driven output exception	Rotating head motor hand wheel observation is stuckIf stuck, the first rule out mechanical failure Such as rotation normal Check the motor encoder connector and motor power cable joints are loose If there is a loose please revise Such as good contact Check the supply voltage of the power supply voltage is too high or too high If you have to adjust As normal, please replace the control box and notify the manufacturer.

E9 E11	Synchronizer signal error.	Power off system Check the motor encoder interface is loose or off Will resume normal after the restart system If you still can not work normally, please inform the factory and replace the motor.
E14	Encoder signal exception	Turn off the system powe Check the motor encoder interface is loose or off Will resume normal after the restart system If you still can not work normally, please replace the motor and notify the manufacturer.
E15	Power module is not normal overcurrent protection	Turn off the system power, and then restart If you still can not work normally, please inform the factory and replace the motor.
E17	Head protection switch is not in the correct position	Turn off the system power, check the nose is opened, the head switch is damaged.
E20	Motor starting failure	After driving the motor does not rotate, do not look for the encoder reference point

4. Port Outline Diagram



① 衣车灯
② 提针补针
③ 烧录口
④ 脚踏板
⑤ 电源开关