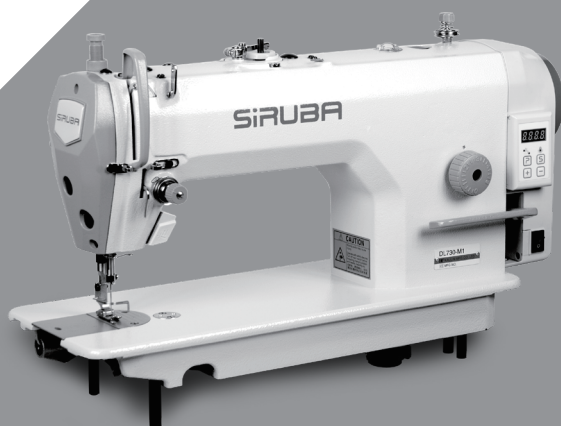


# SIRUBA

電控參數說明書

ELECTRONIC CONTROL PARAMETER MANUAL

■ DL730



CE

## ●前言

感谢你选购本产品，为了你更好的使用，在安装与调试前，请仔细阅读本操作说明及所搭配的缝纫机设备使用说明书，正确的使用。并由专业人员来安装，调试。

### 注意：

本产品仅适用于指定范围的缝纫设备，请勿作其他用途；

本公司拥有对此手册的最终解释权；

使用中若出现任何疑问或对我们的产品及服务有任何的意见或建议，请随时与我们联系！

由于产品升级需要，功能、规格若有更改，恕不另行通知。

本操作指南的用途：

本操作指南基于用户的要求提供相关指导信息；

这些信息涉及设备及其他使用场合、运输、安装、使用和维护；

本操作指南主要面向用户和技术人员。

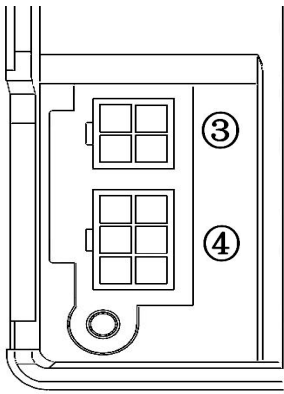
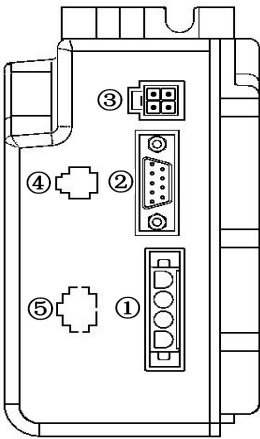
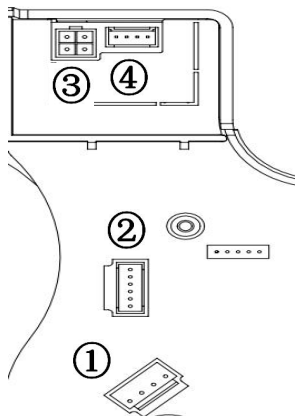
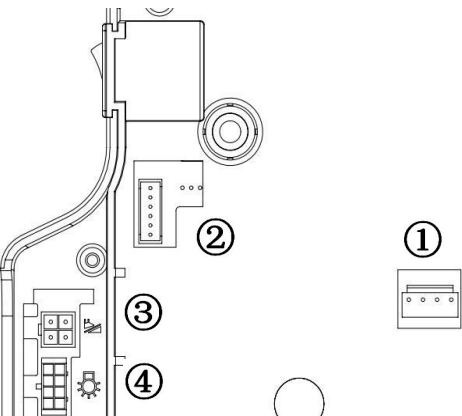
## ●安全说明

- (1) 请确保在插上插头通电以前，控制器开关按钮为关闭。
- (2) 请确保在开关按钮打开前已将各电机接头线插好，否则会提示出错。
- (3) 连接插头是一一对应的，接线时请确认接线端子相互匹配。插入时请不要过分用力，以免造成系统损坏。
- (4) 不要将电机线被外物压住或过度扭曲。以免接头信号线损坏。
- (5) 无专业人员在场，请勿拆开控制器，以免造成意外。





**警告：控制器内部及接口线头均带强电，切勿触碰，以免触电！**

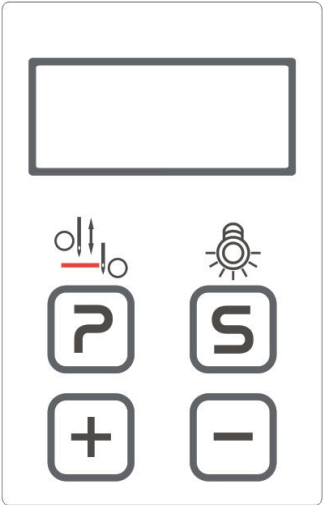
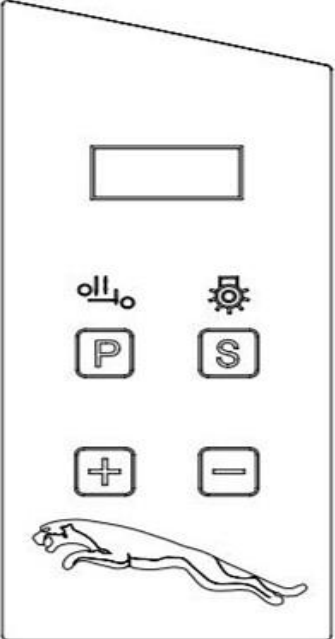
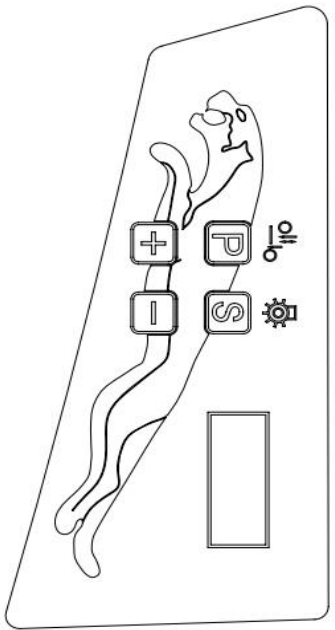
## ●电控技术指标

控制器型号	M-6SD2	M-7SE2\Q1\S1	X1\R1	W1\V1\P1\N1
工作电压	AC220V±20% 50/60HZ	AC220V±20% 50/60HZ	AC220V±20% 50/60HZ	AC220V±20% 50/60HZ
额定功率	550W	550W	550W	550W
电机扭矩	≤3 N·M	≤3 N·M	≤3 N·M	≤3 N·M
电机转速	200rpm ~ 6000rpm	200rpm ~ 4500rpm	200rpm ~ 6500rpm	200rpm ~ 4500rpm
上下停针	有（需配停针器）	有	有	有
过流、过载保护	有	有	有	有

	<p><b>M-7SE2\</b></p> <p><b>Q1\S1</b></p> <p>※ ①、②、⑤ 已内置不需要 外接</p>	
<p>●端口定义</p> <p>① 电机电源插座</p> <p>② 电机编码插座</p> <p>③ 脚踏开关插座</p> <p>④ LED 灯插座</p> <p>⑤ 外置停针器插座</p>	<p><b>M-6SD2</b></p>	
<p>※ 请遵照接口定义及端子 颜色相连接。</p>	<p><b>W1\V1\</b></p> <p><b>P1\N1</b></p>	
	<p><b>X1\R1</b></p>	

## ●操作面板说明


- 1) : 工作模式下, 切换上下停针位; 参数模式下, 作参数设置。
- 2) : 工作模式下, 开关 LED 灯; 参数模式下, 作参数保存。
- 3) 、: 工作模式下, 调节电机转速; 参数模式下, 作参数的选择及调整。

M-6SD2\M-7SE2\Q1\S1	X1\R1	W1\V1\P1\N1
 <p>Diagram of the control panel for M-6SD2\M-7SE2\Q1\S1. It features a rectangular display at the top. Below the display are two columns of buttons. The left column contains a button with a 'P' icon and a button with a '+' sign. The right column contains a button with an 'S' icon and a button with a '-' sign. Above the 'P' button is a small icon of a needle with a red line, and above the 'S' button is a small icon of a light bulb.</p>	 <p>Diagram of the control panel for X1\R1. It features a rectangular display at the top. Below the display are two columns of buttons. The left column contains a button with a 'P' icon and a button with a '+' sign. The right column contains a button with an 'S' icon and a button with a '-' sign. Above the 'P' button is a small icon of a needle with a red line, and above the 'S' button is a small gear icon. At the bottom of the panel is a stylized graphic of a hand holding a needle.</p>	 <p>Diagram of the control panel for W1\V1\P1\N1. It features a rectangular display at the top. Below the display are two columns of buttons. The left column contains a button with a '+' sign and a button with an 'I' icon. The right column contains a button with a 'U' icon and a button with an 'S' icon. Above the 'U' button is a small icon of a needle with a red line, and above the 'S' button is a small gear icon. At the bottom of the panel is a stylized graphic of a hand holding a needle.</p>

## ●参数调整及示例

### 1.1 控制器操作面板显示方式为四位数码管。

待机界面下，按  键， 键，可以调节即时转速。

1.2 待机界面下，按  键，上针位指示灯亮时，为上停针，下停针指示灯亮时，为下停针，指示灯不亮，关闭停针功能。

1.3 待机界面下，按  键，可以打开和关闭机头灯。

### 1.4 进入及修改系统参数：

①上电后，先按住  键不放，再按  键，即进入参数模式，此时数码管显示“P-00”，

②按  ， 键可切换参数，

③选择好参数后，按  键进入参数，使用  ， 键修改参数，

④修改完毕后，按  键保存退出。

### 1.4 电机正反转设置：

①上电后，先按住  键不放，再按  键，即进入参数模式，此时数码管显示“P-00”，

②按  键切换参数至“P-02”，

③选择好参数后，按  键进入参数，使用  ， 键修改数值，

0 代表反转，1 代表正转，初始值为正转。

④修改完毕后，按  键保存退出。

### 1.5 恢复出厂设置：

①先按住  键不放，再按  键，入参数模式，此时数码管显示“P-00”，

②长按  键 3 秒即可恢复出厂设置。

## ● 错误代码及参数表

附表 1：错误代码显示

错误代码	代表含义	可能出现的问题
<b>Er01</b>	停针错误	①电机霍尔坏 ②手轮磁铁脱落 ③9 针信号线接触不良 ④下挂式电控未接外置停针器（⑤插座）开了停针功能
<b>Er02</b>	检测不到脚踏信号	①脚踏接触不良或损坏
<b>Er03</b>	电机霍尔或相位错误	①9 针电机信号线接触不良或损坏 ②电机霍尔坏
<b>Er04</b>	堵转保护	①电机过载 ②电机电源线接触不良
<b>Er05</b>	硬件过流	①电机过载 ②电机信号线接触不良
<b>Er07</b>	串口通讯错误	①操控盒线接触不良或损坏 ②倾倒开关损坏

附表 2：用户参数内容详解

序号	名称	参数范围	出厂值	功能
<b>P-01</b>	最高转速锁定	200~6500	4500	
<b>P-02</b>	电机正反转设置	0~1	1	0 代表反转，1 代表正转，初始值为正转。
<b>P-03</b>	下停角度	6~18	12	12 度
<b>P-04</b>	起缝速度	200~800	250	250 转
<b>P-05</b>	加速快慢	2000~4000	3500	3500 转
<b>P-06</b>	定针缝	0~999	0	
<b>P-07</b>				该参数保留，不更改
<b>P-08</b>				该参数保留，不更改

<b>P-09</b>				该参数保留，不更改
<b>P-10</b>	自动跑合测试	0~1	0	该参数改为 1 时自动跑合，关闭电源跑合停止
<b>P-11</b>			0	该参数保留，不更改
<b>P-12</b>			0	该参数保留，不更改
<b>P-13</b>	电机选择	0~1	0	1 为老电机，0 位普通电机
<b>P-14</b>	最大电流	50~1000	280	
<b>P-15</b>	检测上下针位	0~1	1	1 为检测针位，0 为不检测

## ● Preface

**Thank you for purchasing this product, In order to make use of product better, Before installing and testing, please read the operating instructions and the sewing equipment specification carefully, to use correctly, and be installed and tested by professionals.**

### Note:

This product is only applicable to the specified range of sewing equipments, please do not use for other purposes.

Our company has the right of final interpretation of this manual.

If there is any doubt when using product or any comments or suggestions of our products and services, please feel free to contact us!

Due to upgrade products, features and specifications are subject to change without notice.

The usage of the operating instructions:

The operating instructions provide guidance information based on user's requirements.

The information involves equipments and other usage occasions, transportation, installation, use and maintenance.

The operating instructions are intended for users and technical staff.

## ● Safety Instructions

- (1) Make sure that the controller switch button is off before plugging in power.
- (2) Make sure that all the motor connector cord is plugged in before the switch button turn on, otherwise it will be an error.
- (3) The connection plugs are one-to-one. Please confirm that the terminals match each other when the connection is connected..Please do not over-force when inserting, so as not to cause damage to the system.
- (4) Do not press or over-twist the motor wire by external objects. To avoid damage to the joint signal line.
- (5) Do not disassemble the controller without professionals, to avoid accidents.

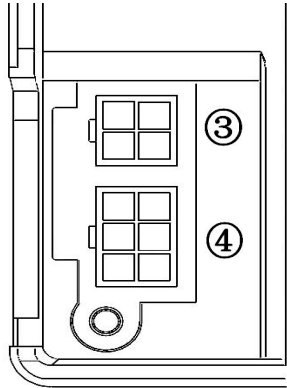
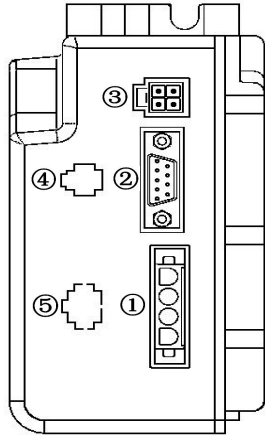
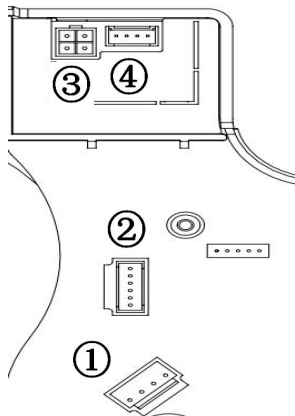
**Caution:** Inside of the controller and interface wire are with strong power, please do not touch, in order to avoid an electric shock!

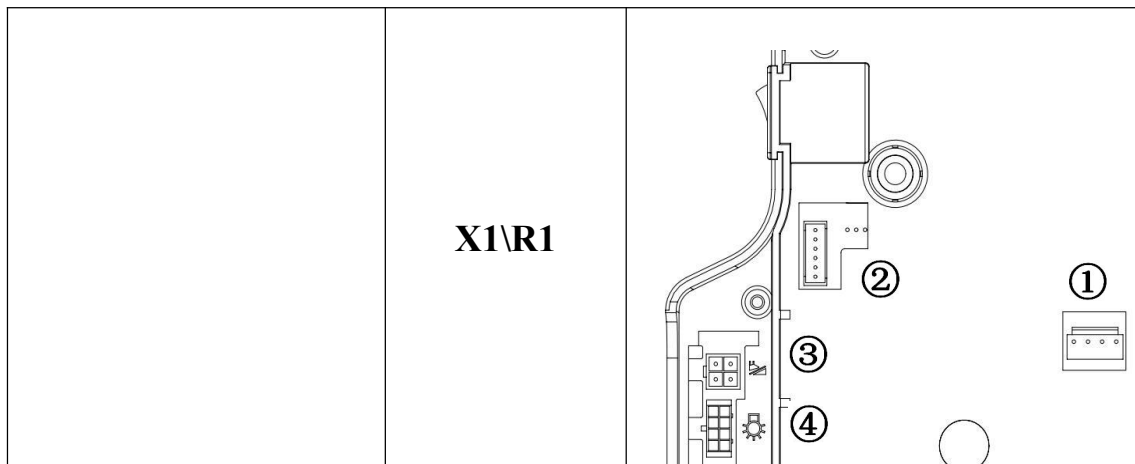
## ● Control box technical index

Controller model	M-6SD2	M-7SE2\Q1\S1	X1\R1	W1\V1\P1\N1
Working voltage	AC220V ± 20% 50/60HZ	AC220V ± 20% 50/60HZ	AC220V ± 20% 50/60HZ	AC220V ± 20% 50/60HZ
Rated power	550W	550W	550W	550W
Motor torque	≤ 3 N·M	≤ 3 N·M	≤ 3 N·M	≤ 3 N·M
Motor speed	200rpm ~ 6000rpm	200rpm ~ 4500rpm	200rpm ~ 6500rpm	200rpm ~ 4500rpm







Up-down needle position	Yes(need device of needle position )	Yes	Yes	Yes
Over current, overload	Yes	Yes	Yes	Yes

<p>● <b>Port definition</b></p> <p>① Electric outlet</p> <p>② Encoding outlet</p> <p>③ Pedal switch Socket</p> <p>④ LED light outlet</p> <p>⑤ Outlay needle position outlet</p> <p>※ Please following port definition and outlet color to connection.</p>	<p><b>M-7SE2\</b></p> <p><b>Q1\S1</b></p> <p>※ ①、②、⑤</p> <p><b>Built-in</b></p>	
	<p><b>M-6SD2</b></p>	
	<p><b>W1\V1\</b></p> <p><b>P1\N1</b></p>	



● **Operation panel description**


- 4)  : Working mode,switch the up-down needle position;Parameter mode,setting the parameter.
- 5)  : Working mode,switch the LED light;Parameter mode,save the parameter.
- 6)  、  : Working mode,adjust the motor speed;Parameter mode,choice and adjust for parameter.

M-6SD2\M-7SE2\Q1\S1	X1\R1	W1\V1\P1\N1

## ●Parameter adjusting and example



1. 1 The panel is four digital Nixie tube display.

Adjust the speed by press the “”, “” ,key when in standby interface.




1. 2 In standby interface ,press the “” ,when the up needle position indicator light is on ,it is on up needle stop , when the down needle position indicator light is on , it is on down position stop, when the indicator light is off ,the needle position function turn off.

1. 3 In standby interface , press the “” key , can turn on/off the machine head light.

1. 4 Enter in and change the system parameter:



①When the power is on ,press the “” key for some seconds ,then press the “”key , it enters into the parameter mode. The nixietube shows “**P-00**” ,


②Press the “”、“” key ,can change the parameter.




③After choose the parameter , press the “”key ,enter into the parameter ,then can change the value of the parameter by “”、“” key ,

④Press the “” key save the value

1. 5 The setting of motor rotate way:

①When the power is on ,press the “” key for some seconds ,then press the “”key , it enters into the parameter mode. The nixietube shows “**P-00**” ,



②Press the “” key can change parameter to “**P-02**” ,


③chosen parameter,press “” ,using “”、“” for changing value:

0: negative rotate 1:positive rotate,the original is positive notate.

④Press the “” key save the value.

1. 6 Reset:

①When the power is on ,press the “” key for some seconds ,then press the “”key , it enters into the parameter mode. The nixietube shows “**P-00**” ,

②Press the “” key for three seconds to reset

## ● Error code and parameter

**List 1: Error code**

Error code.	Meaning	Possible problem
<b>Er01</b>	The error of needle position	①The motor hall is broken ②The hand-wheel magnet fall off ③The connecting of 9 needle signal line is not good ④Hanging controller not connected outlay needle position (NO.⑤outlet) turn on the needle position function
<b>Er02</b>	Can't test the motor signal	①pedal signal line connect not good or broken.
<b>Er03</b>	The hall or phase of motor is wrong.	①The connecting of 9 needle signal line is not good ②The motor hall is broken.
<b>Er04</b>	The protection of locked-rotor	①The motor is overloading. ②The connecting of motor power line is not good.
<b>Er05</b>	The hardware is over-current.	①The motor is overloading. ②The connecting of motor signal line is not good.
<b>Er07</b>	The serial communication is wrong.	①The line connecting of control box is no good. ②Toppling switch damage

**List 2: Parameter**

No.	Name	Parameter range	Leave-factory number	Function
<b>P-01</b>	The locked highest speed	200~6500	4500	
<b>P-02</b>	The setting of motor positive and negative rotate	0~1	1	0:means negative rotate, 1:means positive rotate, the original is positive notate.
<b>P-03</b>	The angle of down stop	6~18	12	12 degree
<b>P-04</b>	The starting speed	200~800	250	250 rpm

<b>P-05</b>	Accelerate the speed	2000~4000	3500	3500 rpm
<b>P-06</b>	Set the needle sewing	0~999	0	
<b>P-07</b>				Retention parameter
<b>P-08</b>				Retention parameter
<b>P-09</b>				Retention parameter
<b>P-10</b>	Automatic Mode switch	0~1	0	No.1 code it's Automatic mode, the function close when turn off power
<b>P-11</b>			0	Retention parameter
<b>P-12</b>			0	Retention parameter
<b>P-13</b>	Selection of motor	0~1	0	1: Old motor, 0: normal motor
<b>P-14</b>	Maximum current	50~1000	280	
<b>P-15</b>	Needle position setting	0~1	1	1:means detecting needle position, 0 :means no detect

# DL730 控制箱 M-7SE2 恢復出廠值 SOP

1. 按住"P"鍵不放再按"- "鍵



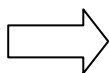
2. 出現 0000 畫面



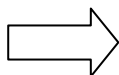
3. 按"+", "- "鍵 與 "P"鍵 輸入密碼 2013(P 鍵是跳下一數字欄位用)



4. 密碼 2013 輸入完成後按"S"鍵一下，出現 P-00 畫面



5. 在 P-00 畫面長按"S"鍵 3SEC，出現 0---畫面，此時按 "+" 鍵確認速度恢復出廠值 4500RPM





高林股份有限公司  
KAULIN MFG. CO., LTD.

由於對產品的改良及更新，本產品使用說明書中與零件圖之產品及外觀的修改恕不事先通知！  
The specification and/or appearances of the equipment described in this instruction book & parts list are subject to change because of modification which will without previous notice.  
DL730, JUN. 2021