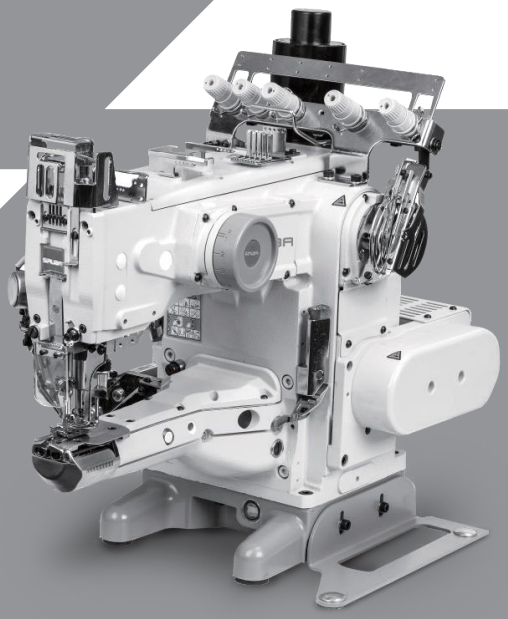
SIRUBA

ELECTRONIC CONTROL PARAMETER MANUAL

VTS1500



Welcome to use the our products, it is the right investment choices in garment industry!

This manual is a reference manual for our newly developed "energy-saving single-lift foot presser direct drive motor and control box" product. Please read this manual carefully in order to make better use of our products.



General Safety Instructions

1：Do not put your feet on the pedals when the control box and motor is switched on (boot status)
2：Let professionals to install and debug this product
3：Do not open the control box and the motor cover when energized
4：Please turn off the power when changing the needle,threading or replacing the bottom line
5：During installation and removal service,please turn off the power and pull the plug
6：Please turn off the power when turn lift sewing machine
7：When use this product, please stay away from high-frequency electromagnetic waves and radio wave transmitters, etc., in case the electromagnetic waves generated interfere with the servo drive to occur wrong action .

Solemnly Declare:
1：Do not comply with the manual book operating regulations and the safety requirements, all accidental occurrence should be taken by yourself.

2：Without our authorization, please do not alter our products, our company is not liable for any consequences arising therefrom.

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2. Control panel Instruction
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1.Product Instruction

We desigh and manufacture the servomotor for the purpose of Mechanotronics. This motor features in energy-saving, high production efficiency, environmental and compact Could be used for different industrial sewing machines

1.Construction

The servomotor is composed of control system and motor

A.Control system includes control box and pedal speeder

This control system features is easy to use and features in excellent performance, including quick start, quick stop (sewing machine), accurate needle Position. Furthermore, the modular circuit has Self-Protection System when against lower voltage,over current,over heat etc. Speed stepless is realized by the pedal speeder.

2.220V、110V Specifications

220V Specifications

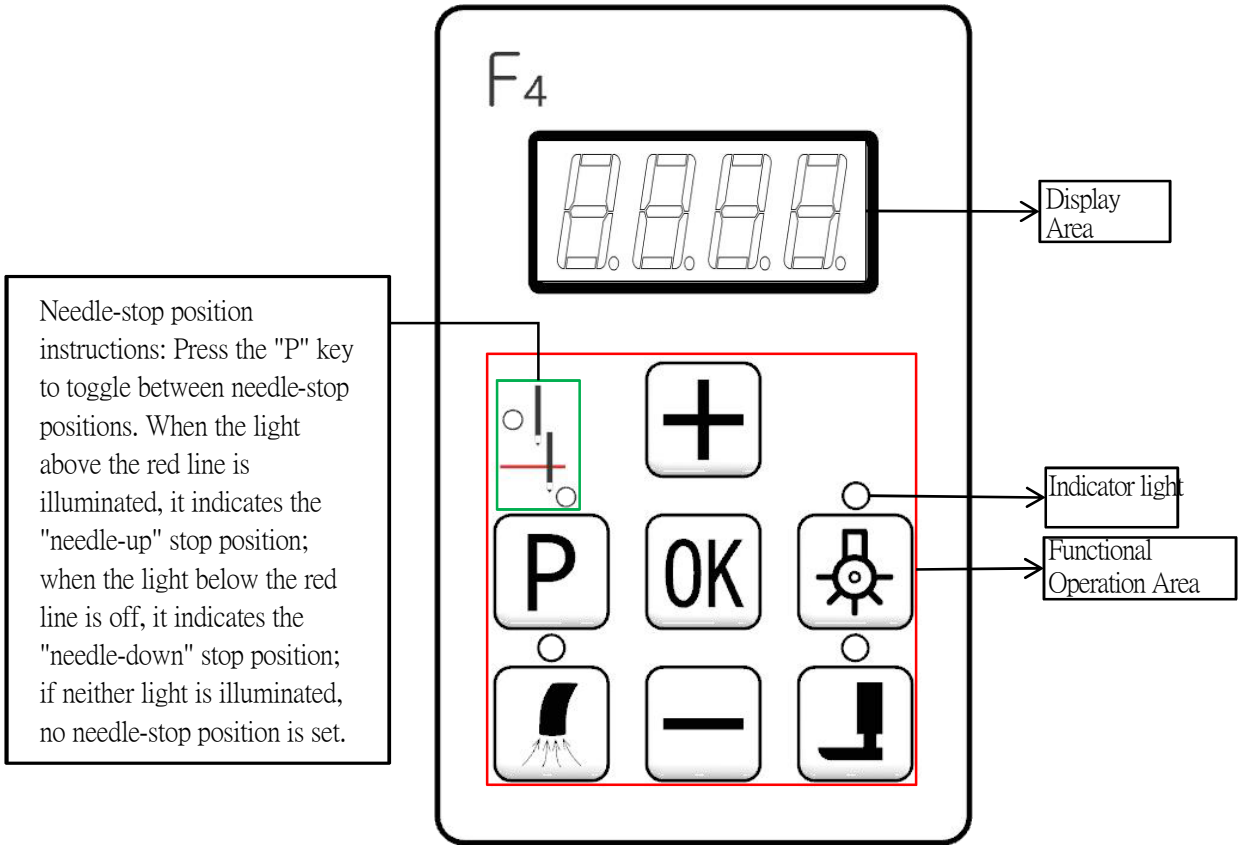
Voltage	**220V 1phase**
Frequency	**50~60HZ**
Speed	**200-6000RPM**
Motor torque	**≤2.2NM**

110V Specifications

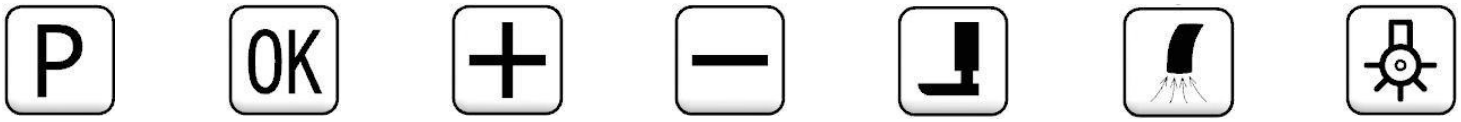
Voltage	**110V 1 phase**
Frequency	**50~60HZ**
Speed	**200-6000RPM**
Motor torque	**≤2.2NM**

2. Control panel Instruction

1、 Introduction to the Main Interface：



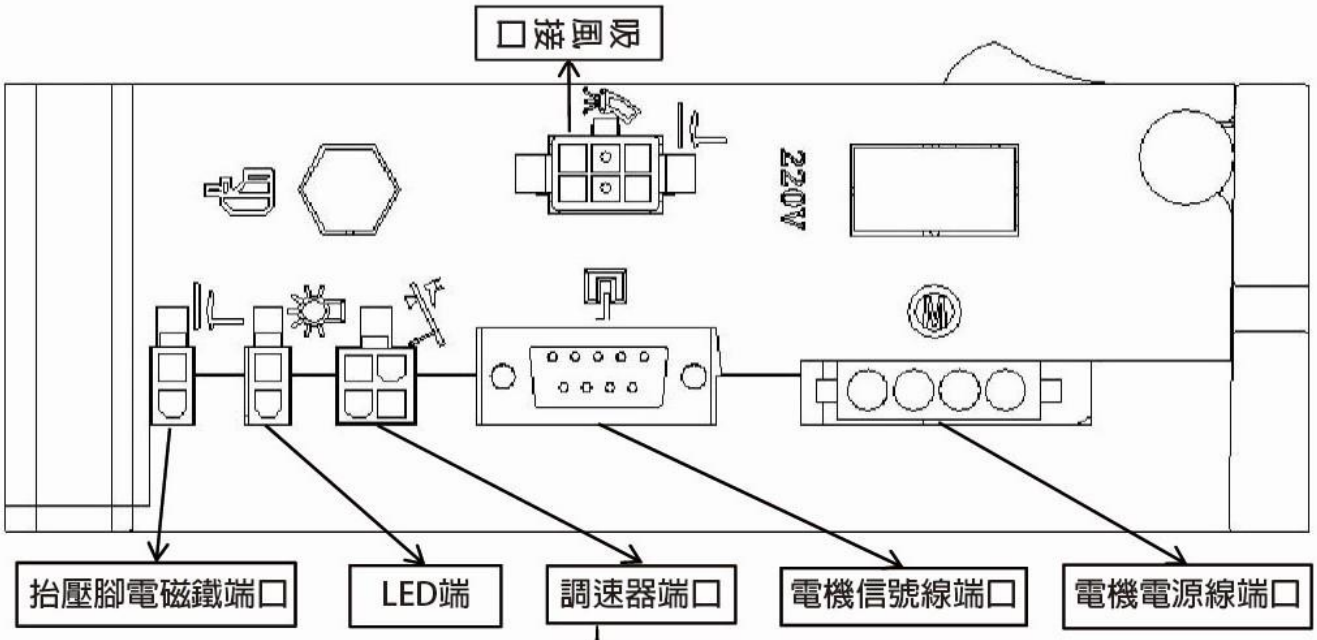
2、 Introduction to Function Keys：

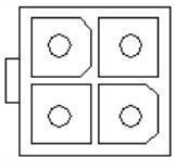
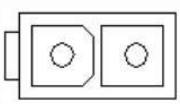


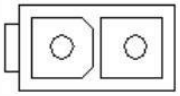
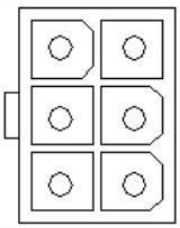
The serial number	Parameters of the code	function instruction
1	P **(Menu button)**	Function Enter button (below to enter the parameter method of operation)
2	OK **(Confirm button)**	Parameter confirm button
3	+ **(Numerical adjustment key)**	Up key (when increasing value)
4	— **(Numerical adjustment key)**	Up key (when increasing value)

5	**(Presser foot switch)**	Press the button once—when the LED on the display panel lights up, the automatic presser foot lift function is enabled; press it again—when the LED on the display panel turns off, the automatic presser foot lift function is disabled. Note: Long-press the key to enter the parameter modification options by entering a password.
6	**(Trimmer switch)**	Press the button once; when the LED on the display panel lights up, the suction function is activated. Press it again; when the LED on the display panel turns off, the suction function is deactivated. Note: Long-press the key to enter the parameter modification menu (requires a password).
7	**(Machine LED button)**	Press the button; when the LED indicator lights up, the headlight function is enabled. Press it again—so that the LED indicator on the display panel turns off—and the headlight function is disabled.

3、 Port Description:



序號	埠		注明	
1	調速器		1	3
			地	OUT 輸入
			2	4
			地	正
3	抬壓腳電磁鐵		1	3
			24V	負

序號	埠		注明	
2	LED		1	2
			5V	負
4	吸風		1	4
			無	無
			2	5
			24V	負
			3	6
			無	無

4.To enter the parameter method of operation:

Example: How to change the motor from clockwise to counterclockwise:
Step one: Open the power;
Step two: Press the ”P” key, no leave, and press “+” key, the screen will display the P-00;
Step third: Press “+” key, change the P-00 to P-02, (P-02) is a motor clockwise or counterclockwise parameters (common parameter list has record);
Step four: Now press “P” key (enter into parameters) screen will display “1” ;
Step fifth: Press “-” key,change “1” to “0”;("1" for clockwise, "0" for the counter clockwise rotation, commonly used in the parameter table is indicated);
Step six: Press the “S” key to determine the parameters, save and exit the parameter.

5.Restore factory settings

Restore factory settings: Press the “P” key, no leave, and press the “+” key, the screen will display the P-00, then press “S” key 3 seconds.

3. Commonly used parameter setting

The serial number	Parameters of the code	The parameter name	Adjusting range		The factory Settings	Other
1	P-01	Maximum peed lock	200-6500RPM		4500 轉	
2	P-02	Direction of rotation	0iscounter clockwise	“1” is clockwise turn	1	
3	P-03	The needle Angle	6-18 度	12 度		
4	P-04	Start sewing speed	200-800 轉	250 轉		
6	P-06	Set the seam	0-999 針	0		
7	P-07	空				
8	P-08	空				
9	P-09	空				

10	P-10	Automatic clearance run(run)	Then press the S key change to 1	0	Turn off the electricity stopped running
11	P-11	Presser foot ascend starting time	0-2000ms	0	
12	P-12	Ascension presser foot protection time	1-120s	4s	
13	P-14	Maximum current limiting	50-1000	280	
15	P-15	Whether to detect the up needle position	1:detecting needle 0:no detection	1	Set “1”, if there is no upper needle stop sensor will alarm ER01; set “0” no alarm
16	P-17	factory reset code	1-3	1	when open the parameter “P09”, then it can occur “P17”,set “3”, then long press “OK” button to recover the factory code
17	P-18	factory code	0000-9999	2013	
18	P-19	soft start stitches	0-15	0	0 stitch is close this function, 1-15stitches is open the soft start , and set the stitches(upper needle position is effective)

19	P-20	soft start speed	200-3500	800	
20	P-21	suction function	0: close 1:start	1	motor running open/close suction function
21	P-22	suction start stitches	1-200	30	suction open stitches(P23 stitches open have effective)
22	P-23	suction close stitches	0-200	0	
23	P-24	suction action maintain time	50-2000ms	120ms	this parameter do not use now
24	P-25	suction full power time	35-1000ms	120ms	
25	P-26	the power of suction full power	5-100%	100%	
26	P-27	suction maintain power	1-100%	80%	
27	P-28	suction release time	0-500ms	20ms	
28	P-29	suction protection time	1-120s	30s	the longest time of suction single action
29	P-30	foot presser trigger mode	0: close 1:start	0	1, set “0”, back step the pedal,the foot presser is not up, set “1”, back step the pedal, the foot presser is up. 2, the foot presser is maintain up, until front step the pedal or the protection time is finish then release, and motor stop, the foot presser is up automatic.

30	P-31	back foot presser lifter start time	0-2000ms	0	the time of back step delay start foot presser
31	P-32	foot presser lifter action maintain time	50-1000ms	160ms	this parameter do not use now
32	P-33	foot presser lifter full power time	35-1000ms	160ms	
33	P-34	the power when the foot presser lifter full power	5-100%	100%	
34	P-35	foot presser lifter maintain power	1-500%	80%	
35	P-36	foot presser lifter release time	0-120ms	30ms	the foot presser lifter release time
36	P-37	foot presser lifter protection time	1-100s	10s	the biggest maintain time of the foot presser lifter single time
37	P-38	display time	200-6500RPM		display the current motor real speed
38	P-39	display the volt of speed controller	14-1010	195 Neutral point volt	Display the current speed controller volt 0-1024, it is equal 0-5V
39	P-40	display DC buses voltage	60-500V	310v	when the volt is higher than 395V will alarm,(DC buses volt/1.414 = AC buses volt)
40	P-41	overload protection switch	0: close 1:start	1	set “0” is close the overload alarm, set “1” is open the alarm, when DC buses voltage is over 395 V , will display Er16, the motor will stop automatic, when volt is lower 385V, the motor can run.

4.Common faults and treatments

The serial number	Error code	Error content	Several possible error problem
1	Er01:	No stop signai	**1.** locator signal plugs not inserted **2.** the locator induction position close to the point keep 1mm-1.5mm distance and magnetic steel
2	Er02:	Not find the speed controller	**1.** Speed control device plug is not insert. **2.** Speed controller wire is broken
3	Er03:	Motor Hall or phase error	**1.** The motor doesnt install good **2.** Nine hole plug contact undesirable **3.** Hall bad
4	Er04:	Lacked-rotor protection	**1.** The motor overload **2.** The motor and the controller connected four hole line contact is not good
5	Er05:	Hardware over-current Protection	**1.** The motor overload **2.** Signal wire not good or broken
6	Er07:	Serial per communication	Display to the system board signal bad or bad

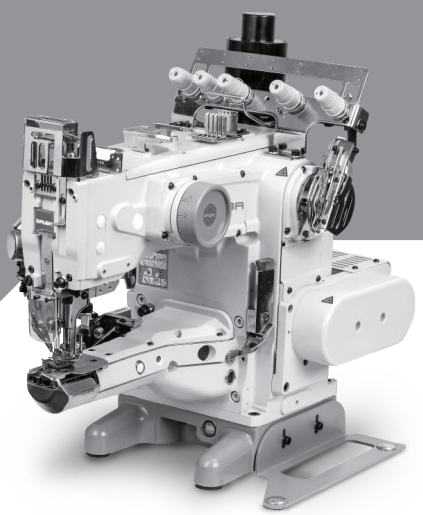
5. Environmental Requirements

1. Please do not work at damp place
2. 220V electronic control: [220V access to power supply voltage stability between (200V~260V)]
110V electronic control: [110V access to power supply voltage stability between (100V~130V)]
3. Must be adequately grounded for safety
4. Do not work at high temperature
5. Do not run motor and control system near to ferromagnetic or high-radiance area

6. warranty Service

1. Our products come with year of quality guarantee,from the ship day.Within guarantee period, service is free of charge, unless man-made damage or misuse
2. During the guarantee period, our free service does not cover below:
(1). Dismantle the motor unit without permission, and cause damage.

3. please contact us whenever have problem.



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.
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