MOTOR SERVO

TEXI POWER 550

User manual

CON SINCRO

ZOJE

Preface

⚠	Caution	Users are advised to read this manual closely and strictly follow directions of other sewing equipments to ensure correct partnership between different equipments. A trained specialist is expected to install and operate this motor.

This motor applies only to the prescribed sewing equipments, pairing with other types of sewing equipments is not allowed.

We have the exclusive right to interpret this manual.

Contact us if you have any doubts, your suggestions and criticism will be highly appreciated.

Safety notes

1. Follow the guidance when installing and tuning this motor.
2. Pay attention to the sign ⚠ which marks the particular steps by which operators should strictly abide to prevent harm.
3. Trained specialists are strongly recommended to handle this motor.
4. Make sure that power supply is grounded, and voltage and technical terms meet the required specifications.
5. When power on, take your feet off the pedal.
6. power off before the following steps could be taken.
   - ■ installing
   - ■ connecting any plugs onto the control box or disconnecting them.
   - ■ threading and changing the needle and turning machine head.
   - ■ At the state of idleness, under repair, or being adjusted.
7. Fasten all tighteners to prevent vibration and needle position dislocation.
8. A space of 30 seconds is needed between power off the system and reboot
9. Maintenance work and parameter-setting of control system should be handled by trained specialists.

10. All spare parts used in repair should be provided or accredited by us.

11. Ground lead should be installed with special care.

⚠	Caution	The controller should be correctly grounded, otherwise, may lead to controller failure or being shocked.

1. Product introduction

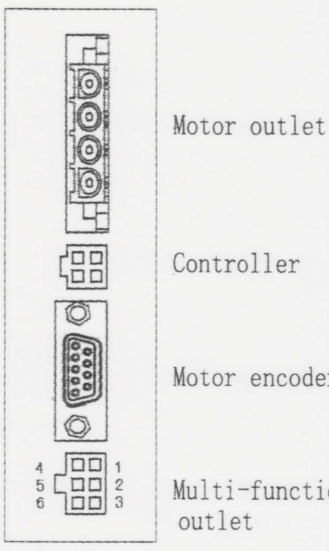
This digital alternate servo system for industrial machinery allows the need-based match between motors and controllers so as to varying the power and speed required by different sewing machines. This system features easy installation and adjustment, strong torque, tiny body, low noise and power efficiency. It is powered from the mains, capable of adjusting to a wide spectrum of voltage. Controller failure from oil leak is preventable. The controller mechanism is upgraded to make it more precise to control speed and needle-stop. The double protection of hard and soft ware made the system more reliable. Human-machine interface makes it easier and more flexible to adjust parameters.

2. The definition of controller interface

Control box, encoder components, and power cord are connected as indicated by the diagram 2-1, each plug can be fitted into its correspondent socket. Check and make sure each plug is fast on its own socket. Multi-purpose socket includes the following:controllable head light interface (5V/100mA), darning needle interface, rockover switch interface, and externally biased synchronous sensor interface.

Multi-purpose socket:

pin number	controllable head light interface	darning needle interface,	rockover switch interface	externally biased synchronous sensor
1	–	darning needle key	–	–
2	head light plus	–	–	+5V
3	minus	–	–	–
4	–	–	–	up needle signal
5	–	–	rockover switch	–
6	–	digital	digital	digital



2-1 Controller extemal interface diagram

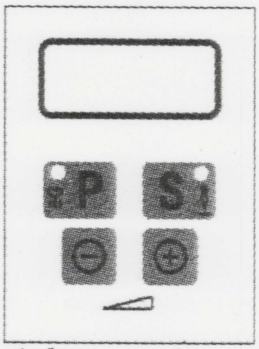
	Caution	Check plug and socket are well suited or not and made the wrong pair if the plug can not be fitted into the socket by average strength.

3. Built-in control panel

4. 3.1 A sketch of control panel

3.1.1 layout overview

Controller penal is consisted of digital display area and four buttons as shown in 3-1. The upper two buttons is accompanied by two LED lights to indicate the (non)functional state.



3-1 layout of control panel

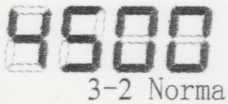
Keys table for operating penal

serial number	visual display	description
1		Functional key/head light key 1) When idle, press once to turn head light on or off 2) When idle, press it together with other buttons to enter into option interface 3) At parameter and monitor interface, press once to return to idle interface, current parameters not saved.
2		Remember key/needle-stope key 1) When idle, press once for needle-stop to be functional 2) At parameter interface, this key confirms and saves adjusted parameters.
3		To increase value at all interfaces
4		Minus key To decrease values at all interfaces

3.1.2 Digital tube interface

Digital tube display interface shows four status: idle, index, data display, and automatic testing.

3.2.1 When idle, there are two displays as below.



3-2 Normal idle status(display max speed)

3-3 Idle alarm status(display code error)

3.2.2 Index interface shows two displays as below.

3-4 Parameter index status

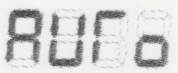
3-5 Monitor index status

3.2.3 Data display interface

Relevant data is shown under different indexes

3-6 Data display status

3.2.4 Automatic testing status interface



3-7 Aautomatic testing display interface

3.2 Quick options

At idle interface, head light turn on or off, needle-stop option can be done to instantly adjust current max speed.

3.2.1 Head light on and off

At idle interface, press P to turn head light on or off. The illuminated LED light indicates head light on.

Press P with 3 seconds to select reverse/positive, the decimal point behind the first number on the display will be light, the point light means reverse, off means positive 3.000

3.2.2 Neddle-stop option

At idle interface , press S to select (non)needle-stop position mode. The illuminated light indicates functioning needle-stop position. 3000.

3.2.3 Current max speed change

At idle interface, press ⊕, ⊖ to adjust max speed with the precision of 50rpm..

3.3 Parameter change by technician

Electronically controlled parameters can be changed to enable the system work best as called for by practical needs

First step: at idle interface, press P and hold the press, then, press S1, two pressed buttons will show the following on digital tube as indicated by 3-8

3-8 Password interface

Second step: press twice ⊕ , digital tube will display "6668", then press S1 to confirm and enter the parameter-change index, indicated by 3-9

3-9 Technician index

Third step: at parameter interface, press ⊕, ⊖ to increase or decrease values to the desired level. Refer to attached sheet 1 for technician index value. After confirming the index, press S1 to enter parameter interface as indicated by 3-10

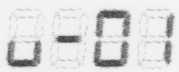
3-10 Technician parameter

Fourth step: press ⊕, ⊖ for the desired parameter values displayed on digital tube.

Fifth step: after adjusting parameters, press S1 to confirm and return to index interface. Whenever to press P will return to idle interface, adjusted parameters will not be saved.

3.4 Monitor parameter

First step: at idle interface, press P and hold it, then press ⊖, the two pressed buttons will display the following as indicated by 3-11



3-11 Monitor index

Second step: at index interface, press ⊕, ⊖ to change the digital tube value to the desired index number. Refer to attached sheet 2 for monitor index

number. After confirming index number, press S to enter monitor index interface, indicated by 3-12

3-12 Monitor index

Third step: at monitor parameter interface, press S to return to monitor parameter index interface. Press P to return to idle status.

3.5 Automatic testing

Automatic operation mode is provided for this motor

First step: at normal idle interface, press P and hold it, then press ⊕, digital tube will display as indicated by 3-13, automatic tasting mode entered, the motor operates and stops according to the preset parameters (index number p-24, p-25, specified in Technician Parameter Table), until quits automatic testing mode.

3-13 Automatic testing interface

Second step: under automatic testing mode, press P for the motor to stop temporarily, quit testing, and return to idle interface.

Attached sheet1: technician parameter table

serial number	index number	controllable value	parameter range	default settings
1	P-01	minimum speed limit	300-1000	350
2	P-02	maximum speed limit	300-7000	4500
3	P-03	soft start function and pin number	0-9	5
4	P-04	soft start max speed	300-1500	350
5	P-05	acceleration of speed	10-90	30
6	P-06	deceleration of speed	10-90	30
7	P-07	switch for displaying real-time speed	0:OFF 1:ON	0

8	P-08	switch for low speed torque	0-9	0
9	P-09	switch for self restoration after overcurrent error	0:OFF 1:ON	0
10	P-10	max voltage option	7-17	10
11	P-11	direction of rotation	0: reverse 1: positive	1
12	P-12	needle-stop sensor mode	0:OFF 1:ON	0
13	P-13	activate up needle position	0:OFF 1:ON	0
14	P-14	needle-position selection	0: up 1: down	0
15	P-15	backpedal for up needle position	0:OFF 1:ON	1
16	P-16	adjust up needle position angle	0-23	0
17	P-17	adjust down needle position angle	0-23	9
18	P-18	pedal curve mode	0-4	0
19	P-19	backpedal position	1-4090	650
20	P-20	pedal free position	1-4090	950
21	P-21	front pedal start-up position	1-4090	1650
22	P-22	pedal low-rev position	1-4090	1800
23	P-23	pedal low-rev position	1-4090	2300
24	P-24	automatic testing operation time	1-99	6
25	P-25	automatic testing stop time	1-99	3
26	P-26	darning speed	300-1200	450
27	P-27	darning sensitivity	100-500	200
28	P-28	rockover on and off mode	0: off 1: on	0
29	P-29	initial angle of motor	0-355	*
30	P-30	save user-defined parameter	0:OFF 1:ON	0
31	P-31	restore factory parameter	8: restore factory parameter 6: restore user-defined parameter	0
32	P-32	head motor select mode	0-9	*
33	P-33	select sewing machine head	0: belt machine 1: direct-drive	0

Attached sheet2: monitor parameter table

code displayed	contents displayed	unit
v-01	busbar voltage, unit: V	V
v-02	current speed, unit:rpm	rpm
v-03	operating voltage, unit:*100mA	*100mA
v-04	1system version number1	
v-05	2system version number2	

Attached sheet3: error-code table

error code	code meaning	trouble shooting
E-01	hardware overcurrent	Power off system, power on again after 30 seconds, replace controller and contact us if not work.
E-02	software overcurrent	
E-03	under voltage	Power off controller, check if the input voltage is too low. replace controller and contact us if not work after reboot
E-04	overvoltage when motor stopes	Power off controller, check if the input voltage is too high. (>245v) replace controller and contact us if not work after reboot
E-05	overvoltage when motor operates	
E-06	motor stall	Power off controller, check if the plug is loose slap or broken. Replace controller and contact us if not work after debug and reboot
E-07	signal error for head needle-stop	Check the cable linking motor encoder or head synchronous device and controller for any loose, slap, broken connection. Replace controller and contact us if not works after debug and reboot
E-08	read-write error	Power off, then, reboot, Replace controller and contact us if error remains
E-09	over speed protection	Power off system, power on again after 30 minutes. Replace controller and contact us if not work
E-10	reverse-rev error	
E-11	overloaded	
E-12	circuit fault	
E-13	hall error	Check the cable linking motor encoder and controller for any loose, slap, broken connection. Replace controller and contact us if not work after debug and reboot
E-14	power down fault	Check the power plug
E-15	pedal signal error	Check the cable linking pedal and controller for any loose, slap, broken connection. Replace controller and contact us if not work after debug and reboot