



Full automatic disconnect-type sewing series manual V1.1

1. Safety instruction














- Please read the operation manual and related sewing machinery datasheet carefully before correct use.
- 1.1** (1) Power voltage and frequency: please refer to motor and control box nameplate.
(2) Interference from electromagnetic wave: please keep far away strong magnetic or high radiation environment in order to avoid obstructions and make to misoperation.
(3) Grounding: to avoid the noise obstructions or leakage of electricity accident (inculding sewing machine, motor, control box and positioner).
- 1.2** Please make sure power off at least 1min and then can open control box cover, because there are dangerous high voltage.
- 1.3** Please turn off the power while repairing or wearing needle in order to protect operator's safety.
- 1.4**  Used where potential dangers exist.
 Used where high voltage and electric danger exist.
- 1.5** Product warranty period of one year on condition that this machine is operated correctly and no man-made damage.

2. System parameter table:

PF7: Direct driving lock-stitch sewing 9700 **PF8:** Direct driving lock-stitch sewing 9800 **PFH:** Direct drive thick material flat sewing three auto
PFS: Direct drive twin needle flat sewing three auto **PF9:** Direct drive flat sewing three auto backstitch presser foot linkage **PF2:** Direct drive plat sewing three auto with thread pressing **PFH2:** Direct drive thick material flat sewing three auto with thread pressing **PF82:** Direct drive plat sewing three auto with thread pressing 9800 **PFH8:** Direct drive thick material flat sewing three auto 9800 **PFH9:** Direct drive thick material flat sewing three auto with thread pressing 9800 **PFH1:** Direct drive thick material flat sewing bisynchronous **PFY1:** JY Single needle double synchronous thick material machine
PFY2: JY Single needle double synchronous thick material machine belt clip wire

No	Project	Content	Applicable models	Setting range	The default value	Level
1	Sewing speed	Set sewing speed	PF7 PF8 PF2 PF9 PF82	200~3000rpm	3500	I
			PFS	200~3000rpm	2300	
			PFH PFH2 PFH8 PFH9	200~3500rpm	3000	
			PFH1 PFY1 PFY2	200~3000rpm	1800	
2	Soft-start function	0: No soft-start function 1'9: Soft start stitches	PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	0~9	0	I
			PFS		4	
3	Ornamental bartacks	0: Invalid 1: Effective	All models	0/1	0	I
4	Fixed-length seam sewing speed	Set fixed-length seam sewing speed	PF7 PF8 PF2 PF9 PF82	200~4000rpm	3000	I
			PFS	200~3000rpm	1400	
			PFH PFH2 PFH8 PFH9	200~3500rpm	2500	
			PFH1 PFY1 PFY2	200~3000rpm	1800	
5	Simple sewing mode Settings	0: invalid 1: effectively	All models	0/1	0	I
8	Needle position setting	Intermediate stop when the needle needle position setting 0: Down needle position 1: Up needle position	All models	0/1	0	I
9	Back stitch speed limitation	can keep needle from breaking while backstitching	All models	500~1500rpm	800	I
19	Solid after before sewing stop	0: unavailable 1: available	All models	0/1	0	I
20	Setting of reverse sewing switch function	Reverse sewing switch mode 0: Only reverse sewing 1: Reverse sewing and fill needle 2: Only reverse sewing, standby without operating	All models	0/1/2	0	I
21	soft start speed 1	speed of the 1 st needle of soft start	PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	100~3000rpm	600	I
22	soft start speed 2	speed of the 2 nd needle of soft start	PFS		400	
			PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	100~3000rpm	1000	I
23	soft start speed 3	speed of the 3 rd ~9 th needle of soft start	PFS		800	I
			PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	100~3000rpm	1500	
24	Presser foot soft lowering function	0: unavailable 1: available	PFS		1200	I
24	Presser foot soft lowering function	0: unavailable 1: available	All models	0/1	0	I
25	Presser foot lift function	0: unavailable 1: available	PF7 PF8 PF2 PFH PFH2 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	0/1	0	I
26	Auto lift presser foot function	0: unavailable ; 1: Auto presser foot lift when shut down	PFS PF9		1	
			All models	0/1	0	I
27	Power on and positioning	0: unavailable 1: available	All models	0/1	1	I
28	signal mode for turn/lift switch	Setting of signal mode of turn/lift switch of machine head 0: always open 1: always close 2: forbid a protection	PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	0/1	0	I
29	Presser foot soft lowering time	To set presser foot soft lowering time	PFS		1	
			All models	50~500ms	300	II
32	Decorative bar-tacking dwell time	To set decorative bar-tacking dwell time	PF7 PF8 PF2 PF9 PF82		50	I
34	To select standard bar-tacking pedal speed mode	0: Auto bar-tacking speed ; 1: Pedal speed	PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2	5~500ms	100	
			All models	0/1	0	II
35	By-piece rate setting	0: No by-piece function 1'20: Plus 1 to by-piece value for each set thread trimming	All models	0~20	1	I
37	Thread wiping operation time	Thread wiping operation time	PF7 PF8 PFH PFS PFH8 PFH1 PFY1 PFY2	0~800ms	40	II
41	Low speed	The lowest speed of pedal	All models	100~400rpm	200	I
42	Pedal curve selection	0: normal: 1: Slow acceleration 2: Quick acceleration	All models	0/1/2	0	I
43	Dial the line that can set	0: unavailable 1: available	PF7 PF8 PFH PFS PFH8 PFH1 PFY1 PFY2	0/1	1	I
*44	thread-cutting speed	thread-cutting speed	All models	100~400rpm	280	I
45	Reverse sewing speed limit switch	processing can prevent reverse sewing needle breakage 0: Infinite speed 1: have the speed limit	All models	0/1	0	I
46	pressor foot lifting delays sewing	delay with pressor foot lowered	All models	0~800ms	200	II
47	Time of presser foot magnet full voltage output	Time of presser foot magnet full voltage output	All models	0~800ms	150	II
48	Presser foot magnet voltage output duty cycle	Presser foot magnet voltage output duty cycle	All models	0~100	30	II
49	output duty cycle of pressor foot lifting	output duty cycle of pressor foot lifting	All models	1~60(s)	12	II
50	output time of total pressure of reverse-sewing	output time of total pressure of reverse-sewing	All models	0~800ms	150	II
51	output duty cycle of reverse-sewing	output duty cycle of reverse-sewing	All models	0~100	40	II
52	hold time of reverse-sewing	forced shut-down after hold time of reverse-sewing	All models	1~60(s)	12	II
53	starting reinforcing-sewing speed	starting reinforcing-sewing speed	PF7 PF8 PF2 PF9 PF82		1800	I
			PFH PFH2 PFH8 PFH9 PFH1 PFY1 PFY2		1200	
			PFS		1000	
54	starting reinforcing-sewing compensation 1	parameter of starting reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		30	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		50	
			PFS		10	
55	starting reinforcing-sewing compensation 2	parameter of starting reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		10	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		15	
			PFS		15	
56	ending reinforcing-sewing speed	ending reinforcing-sewing speed	PF7 PF8 PF2 PF9 PF82		1800	I
			PFH PFH2 PFH8 PFH9 PFH1 PFY1 PFY2		1200	
			PFS		1000	
57	ending reinforcing-sewing compensation 1	parameter of ending reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		30	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		50	
			PFS		10	
58	ending reinforcing-sewing compensation 2	parameter of ending reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		10	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		15	
			PFS		15	
59	ending reinforcing-sewing speed	ending reinforcing-sewing speed	PF7 PF8 PF2 PF9 PF82		1800	I
			PFH PFH2 PFH8 PFH9 PFH1 PFY1 PFY2		1200	
			PFS		1000	
60	continuous reinforcing-sewing compensation1	parameter of continuous reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		30	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		50	
			PFS		10	
61	continuous reinforcing-sewing compensation2	parameter of continuous reinforcing-sewing stitch compensation	PF7 PF8 PF2 PF9 PF82		10	I
			PFH PFH2 PFS PFH8 PFH9 PFH1 PFY1 PFY2		15	
			PFS		15	
62	Pedal travel upon start	Pedal position upon start Travel relative to medium pedal	All models	10~50 (0.1°)	25	II
63	Pedal travel upon acceleration	Pedal position upon start acceleration Travel relative to medium pedal	All models	10~100 (0.1°)	50	II
64	Pedal travel at highest rotation speed	Pedal position at highest rotating speed Travel relative to medium pedal	All models	10~150 (0.1°)	110	II
65	Pedal travel upon presser foot lift	Pedal position upon pedal lift Travel relative to medium pedal	All models	-100~-10 (0.1°)	-30	II
66	Pedal travel upon presser foot lowering	Pedal travel from presser foot lowering position to neutral position Travel relative to medium pedal	All models	5~50 (0.1°)	10	II
67	Pedal travel 1 upon thread trimming	Pedal position upon start trimming without presser foot function Travel relative to medium pedal	All models	-100~-10 (0.1°)	-30	II
68	Pedal travel 2 upon tread trimming	Pedal position upon start thread trimming with presser foot function Travel relative to medium pedal	All models	-100~-10 (0.1°)	-60	II
69	Down needle positioning position	To adjust down needle position	PF7 PF8 PF2 PFH PFH2 PF9 PF82 PFH8 PFH9 PFH1 PFY1 PFY2	120~240	177	I
70	Reverse needle lift function	0: unavailable ; 1: available	PFS	60~180	120	I
71	Reversal of needle lift angle	Reversal of needle lift angle	All models	0/1	0	
72	Thread clamp strength adjustment	0: Clip line function is invalid 1'9: Three Intensity Adjustment	All models	0~45°	20	I
73	Thread pressing actuation angle	Thread pressing actuation angle	PF2 PFH2 PF9 PF82 PFH9 PFY2	0~9	7	I
74	Thread pressing release angle	Thread pressing release angle	PF2 PFH2 PF9 PF82 PFH9 PFY2	10~150°	100	I
77	Clutch magnet actuation time	Clutch magnet actuation delay time	PF9	160~300°	270	I
78	Clutch magnet release time	Clutch magnet release delay time (set as 0 no release)	PF9	0~2000ms	60	I
79	return to factory-set parameter	5: restore the current level factory parameters 8: restore the current level and sewing factory parameter set According to S button, select yES, then press the S key execution	PF9	0~2000ms	300	I
80	highest speed of sewing	highest speed of sewing	All models	0~15	0	I
			PF7 PF8 PF2 PF9 PF82		4000	
			PFS		3000	
			PFH PFH2 PFH8 PFH9		3000	
83	Aggravating function	0: invalid; 1'15 strength regulation	PFH1 PFY1 PFY2		2000	II
			All models	0~15	6	
			PFS		175	
			All models	150~200	175	
85	Suction angle of shear line	To set suction angle of shear line	All models	200~300	260	II
86	Power angle of shear line	To set power angle of shear line	All models	300~360	340	II
87	Release angle of shear line	To set release angle of shear line	All models	10~300ms	80	II
92	Pedal presser foot lift confirm time	Pedal presser foot lift confirm time	All models	-15~-15(0.1)	0	II
93	The neutral position of the pedal	Trimming the neutral position of the pedal	All models			II

3. Operation box use

Function	Button	Described
Starting reinforcing-sewing		Execute starting reinforcing-sewing 2 times, to and fro.
		Execute starting reinforcing-sewing 1 times, to and fro.
ending reinforcing-sewing		Execute ending reinforcing-sewing 2 times, to and fro.
		Execute ending reinforcing-sewing 1 times, to and fro.
free-style sewing		Press treadle ahead for normal sewing, stop in the middle, behind for thread-cutting and thread wiping.
continuous reinforcing-sewing		1. Press treadle ahead for automatic sewing, to and fro, which is set at D and can reach 15times. (F) 2. Continuous reinforcing-sewing is in trigger mode by default, treadle doesn't need to be kept being pressed, and corresponding trigger light of preset sewing is solid lit. 3. Previous ending reinforcing-sewing setting is invalid if this function is valid.
preset sewing		1. Press treadle ahead to execute sewing times set at E or E, F, G, H. 2. Sewing will stop immediately if treadle is lifted; press treadle again, it will go on with the rest. 3. Ending reinforcing-sewing (if selected), thread-cutting and thread wiping will be automatically executed after sewing is completed.
parameter setting		1. For preset sewing. Trigger treadle and the system will automatically conduct sewing at E, F, G, H sections: the treadle doesn't need to be kept being pressed. 2. Solid light for continuous reinforcing-sewing mode means that it is trigger mode by default.
thread-cutting		Set or cancel thread-cutting function.
needle-lift ing/stitch		Free sewing mode, can be based on the according to the length of time is different, complementary half needle, a needle or continuous feeding half needle.
Pinnumbert/check choice		1. Implementation of this key, circulating switch display 3 pin number to set the display value upper end: A, B, C, D; Period of pin number, Light corresponding level; Middle end: E, F; Period of pin number, Light corresponding level; lower extreme: G, H; Period of pin number, Light corresponding level; 2. Corresponding to A, D period of pin number, can set range 0 ~ 15 needle, B, paragraph C pin number, can set range 1 ~ 15 needle, among them, the liquid crystal display A B C D E F on each for 10 11 12 13 14 15 stitches. 3. To take the thread clamp function model, according to the buttons can show long thread clamp strength adjustment (3 bright lights and three, liquid crystal display [7]), again according to the key exit.
parameter setting		1. Entering different parameter level On the sewing setting interface, the user can press the button P to enter the Parameter Interface, then the Level I parameters in the parameter list will display. On the sewing setting interface, the user can keep pressing the button for a few seconds to enter the Password Entering Interface. After entering the right maintenance password, then the user can press the button P to enter the Parameter Interface, now the Level I and Level II parameters in the parameter list will display. 2. Password setting On the sewing setting interface, the user can keep pressing the button P for a few seconds to enter the Password Entering Interface, and press the button combination of "burst button + cutting button" to enter the Password Resetting Interface. The three indicators (respectively are Indicator S1, S2 and S3 from up to down, among which one is on) corresponding to the button S indicates the current status. S1 lights up, old password input, ending the key combination trigger key + tangent key, if the correct password into the password reset interface (mistakes have stayed the S1 state), and at the same time S2 light, prompting the input new password and click confirm S3 S key input again when the light is the new password, according to S key after two input if consistent, then set success, return to parameter interface. If the new passwords entered are not the same, the Indicator S1 will be on and the LC screen will be reset, and the user shall enter the old password again. If the user presses the button P, the user will be brought back to the interface parameters and no modification will be saved. You can choose from the numbers of 0 to 9 or the letters of A to F for every single character of the password. Please do keep the new password in mind.
		Speed down. Keeping pressing to lower speed, the display will automatically switch to speed set. Simple seam, free seam effective. (Application of liquid crystal panel).
speed key		Speed up. Keeping pressing to increase speed, the display will automatically switch to speed set. Simple seam, free seam effective. (Application of liquid crystal panel).

note: After the power is above HMI display "[99]", click S (aircraft code setting interface): the first time when entering the display '-' '+' , according to scan the models, S button, enter (confirmation interface), press the '-' '+' key switch to 'yES' or 'No' ; selection yes: press the S key to set the selected type code, after finishing into the free joint interface.

Select No: press the S key to return to [type code set interface], '-' '+' key to continue browsing model.

4. System Info

Operation panel default mode, press the button at the same time in P made sewing needle trigger select key, enter the system monitoring state through the +key choose need to look at the project, according to the S button to enter/exit the selected projects such as the need to exit monitoring interface, according to P keys can be.

show frame numbers	Item Name	unit	show frame numbers	Item Name	unit
JJ	Plan number	piece	U5	Mechanical Angle with	limit
U1	speed of motor control	rpm	U6	Motor initial Angle	limit
U2	Motor Current	0.01A	U7	Master control program version	/
U3	Motor Voltage	V	U8	Head type	/
U4	Pedal voltage	0.01V	vEr	Operation box version of the program	/

5. Error codes

Error Code	Contents	Possible reasons	Checking and treatment
E011 E012 E013 E014	Motor signal error	Motor position sensor signal failure	If electric engine plug is well contacted; if electric engine signal detecting device has been broken; if sewing machine handwheel correctly installed.
E015	Model type error	Unable identify operating box model type	Check operating box
E021 E022 E023	Motor overload	motor stall motor overload	If electric engine plug is well contacted; if machine head or thread-cutting mechanism has been blocked completely; materials are too thick; Electrical signal detection signal whether the normal.
E101	Hardware drivers fault	Current detection abnormal Driving hardware error	Current detection loop system is working properly; Whether the damage to the device driver.
E111 E112	Voltage too high	High input voltage Brake circuit fault Voltage detection error	System into line voltage is too high; Braking resistance are working properly; System voltage detection circuit are working properly.
E121 E122	Voltage too low	Actual low voltage Voltage detection is wrong	If the voltage on the inlet wire is too low Whether the system voltage detection circuit the normal work.
E131	Current circuit fault	Current detection abnormal	Current detection loop system is working properly.
E133	0z circuit fault	0z circuit fault	0z circuit system is working properly.
E151	Magnet circuit error	Over current magnet circuit	If machine head magnet suffers short circuit Electromagnet circuit is working properly.
E201	over current	Current detection error	Current detection loop system is working properly Electrical signal is normal.
E211 E212	Abnormal motor operation	Current or voltage detection error	If electric engine plug is well contacted; If electric engine signal is matched.
E301	Communication error	Sci circuit error	If operation box plug is well contacted; if operation box components are damaged.
E302	Operation inner failure	Sci circuit error	To check whether the operating box is damaged.
E402	Pedal ID fault	Pedal verification fault	Pedal connection is loosen.
E403	Pedal zero position fault	The pedal zero position over range	The pedal is damaged or it is not under stop state when correction.
E501	Safety switch fault	Safety switch effective	Put down the head or check turned up switch.
P.oFF	Power off Display	Power off	Wait for power supply to resume.
Eval	Trial expired	Trial expired	Contact the dealer processing

- Note: 1. Sewing abnormal action (speed electromagnet work abnormal) : in the control interface view model is correct;
2. Turn up E501 fault when: sure it is normal to switch detection, temporary use can change the P-28 parameters;
3. If the above according to check the project cannot rule out fault, please seek technical support.

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