CONTROL PANEL MANUAL

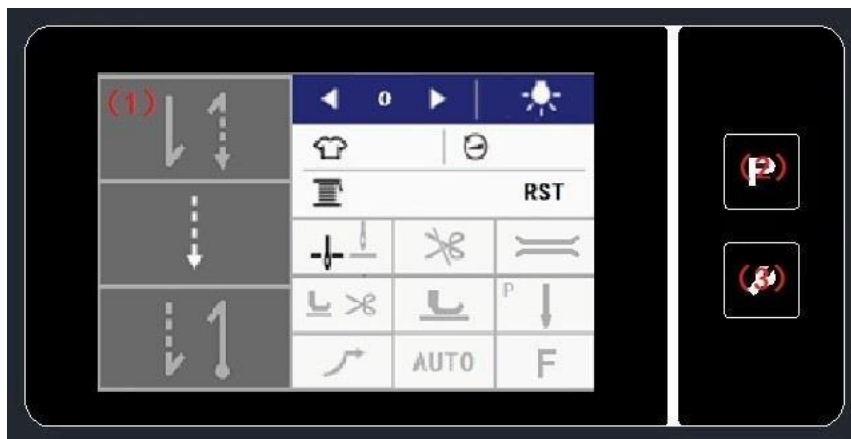## HD 8-26
HD 8-32

Industrial automatic heavy duty sewing machine with unison feed
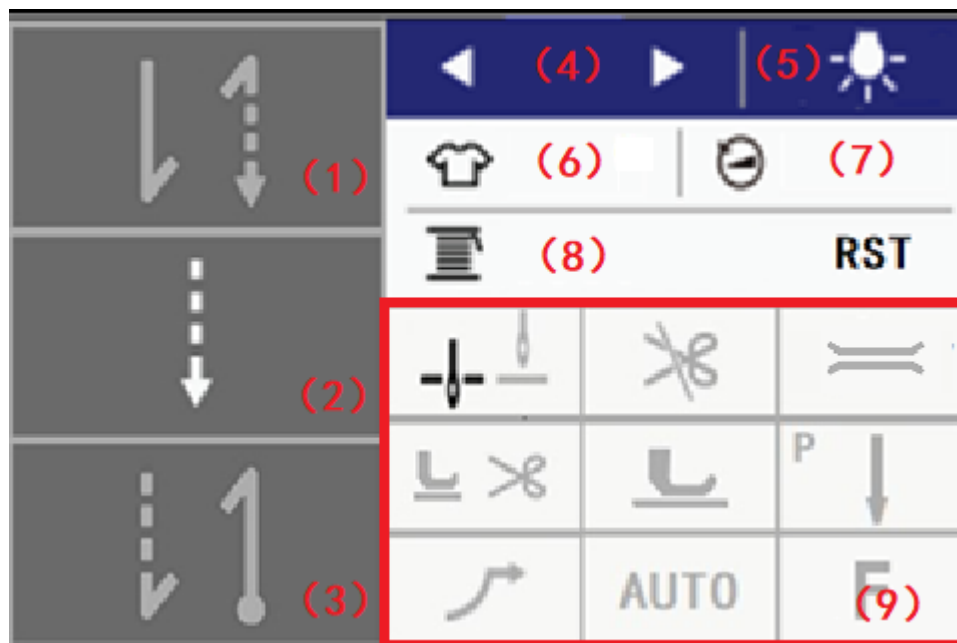
HD texi

1. Control panel description

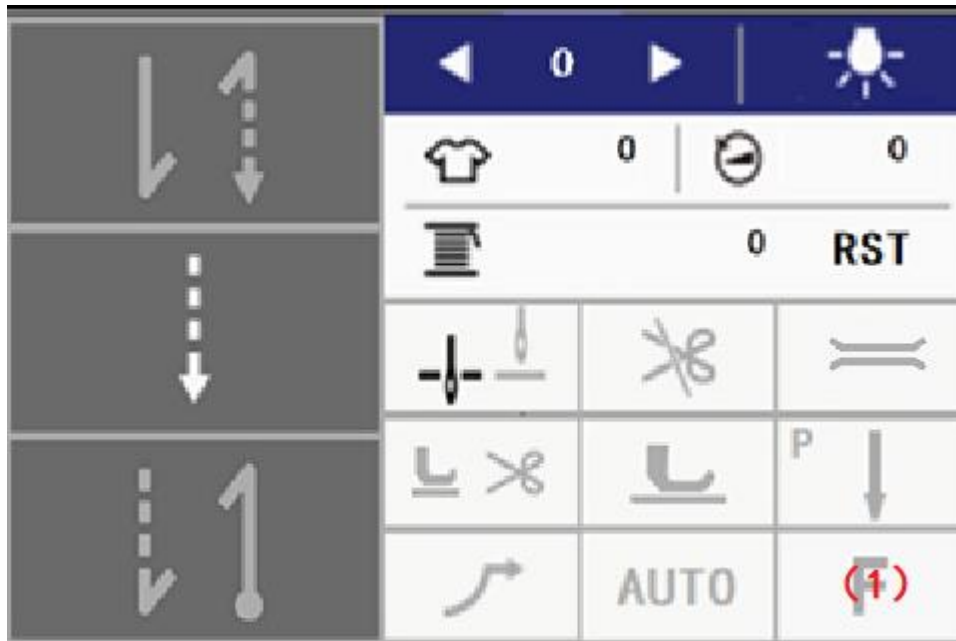| 1	Main page
2	Software update button
3	Service button

1.1 Main page

1	Start bartack button	Set start bartack parameter
2	Main sewing button	Set Main sewing parameter
3	End bartack button	Set end bartack parameter

| 4	Para group button	Set current para group
5	LED brightness adjustment	Set led brightness
6	Sewing counter	Show current output
7	Motor speed	Show current motor speed
8	Bobbin stitch counter	Show bobbin stitch counter
9	Omnibox	Set the corresponding function

1.2 Parameter editing

Click the F function key, and then enter the password 3112,you will enter parameter table.
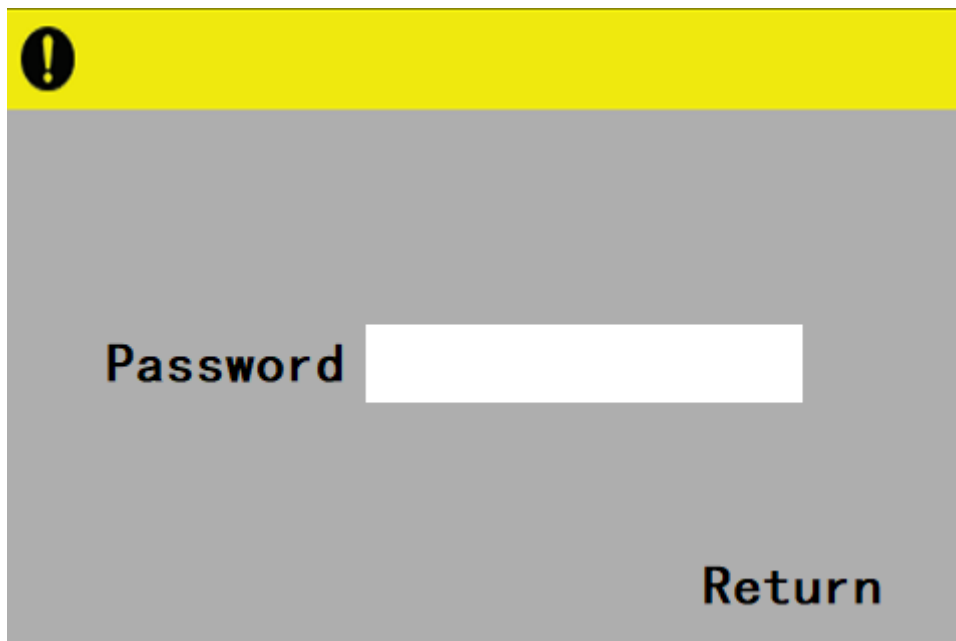
1	Back to main page
2	Enter the motor parameter edit page
3	Go back to the last page
4	Go to the next page
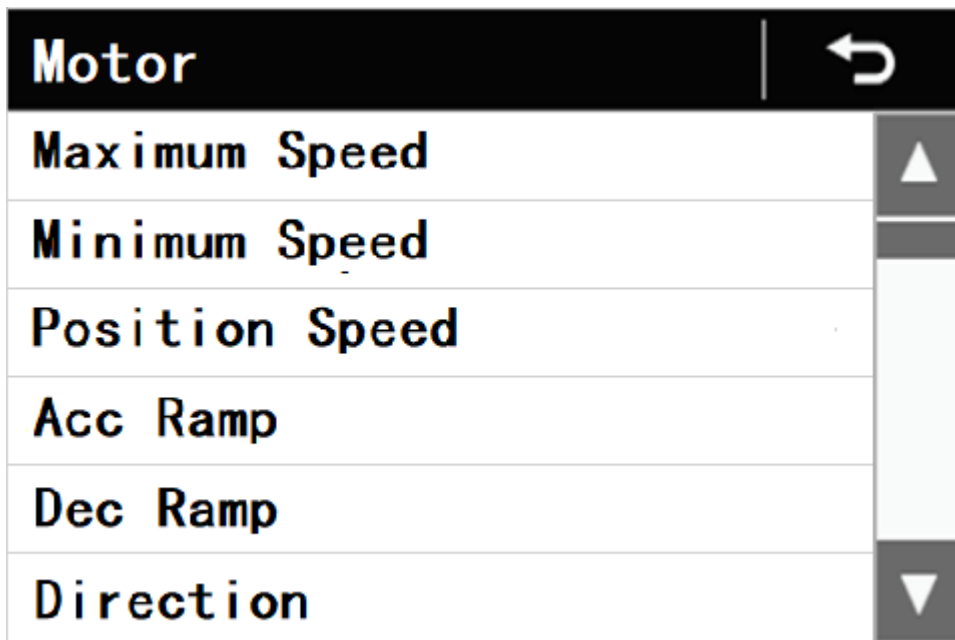
Click to modify parameters.

2 Sewing parameter setting

2.1 Composition of sewing section

Start bartack
Main　(1~12 Segmented)
End bartack
Accessibility

2.2 Start bartack

1	Catch backtack forward	1~99
2	Catch backtack backward	1~99
3	Page num	1~10
4	Speed	300~3000n/min
5	Enable	0: enable; 1: disable
6	Mode of end bartack	:Sewing continues after end
		: Machine stop and must be restarted using the pedal
		: Thread cutting after after start bartack

2.3 Main sewing
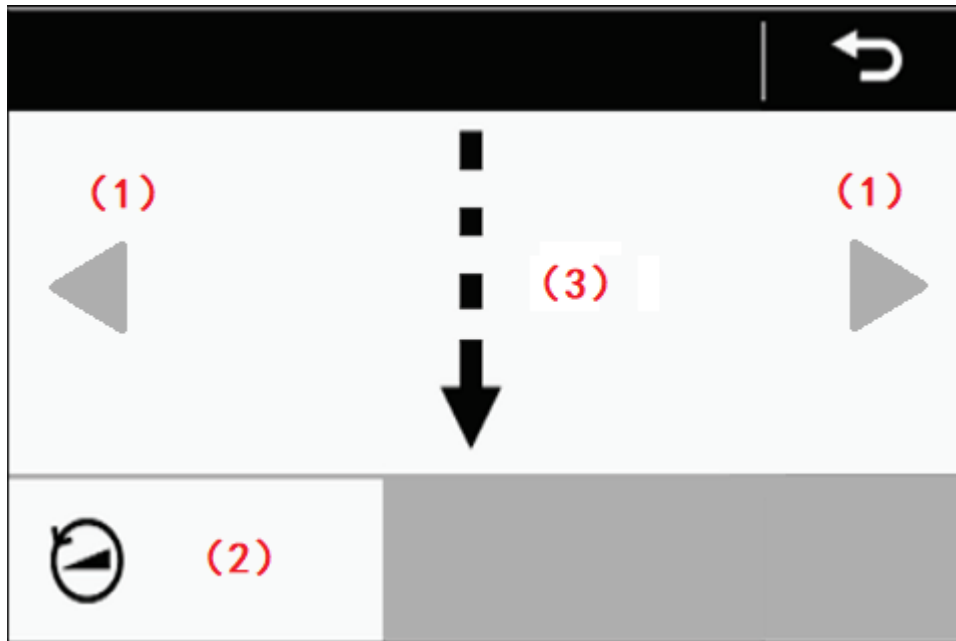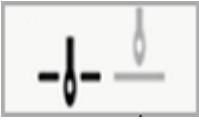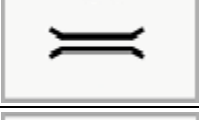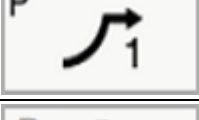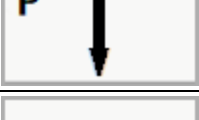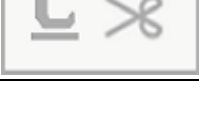
	Sewing type	Free, Fixed stitch
1	Sewing type switch button	0~1
2	Speed	180~3000n/min
3	Stitch	1~99

2.4 End bartack
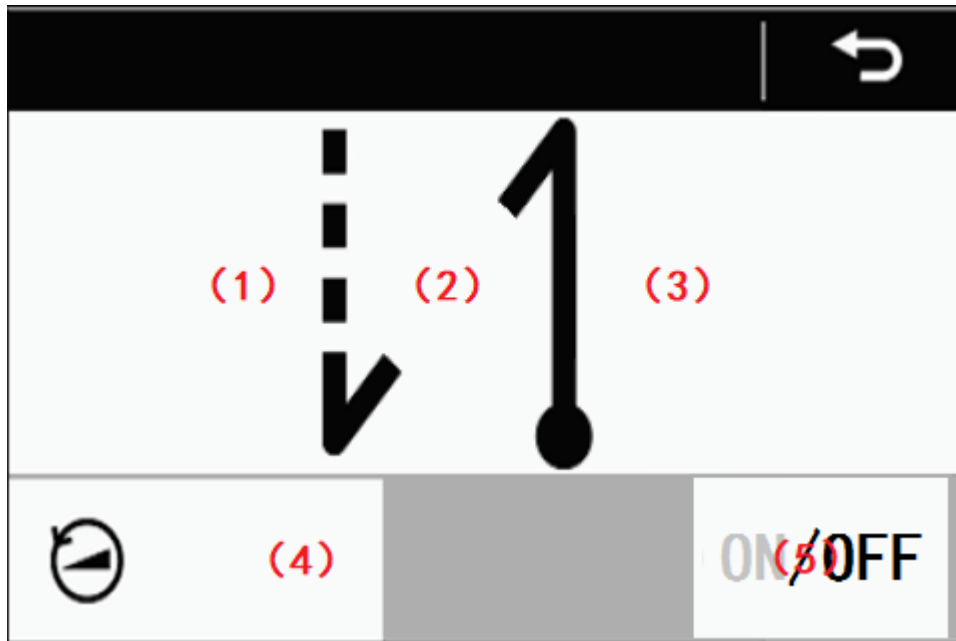
1	Catch backtack forward	1~99
2	Catch backtack backward	1~99
3	Page num	1~10
4	Speed	300~3000n/min
5	Enable	0: enable; 1: disable

2.5 Accessibility

Needle Stop position		Needle in low position
		Thread lever at top dead center
Cut		Off
		On
Clamp		Off
		On
Soft start		Off
		On
Multi-segment sewing		Off
		On
Auto		Fixed stitch auto off
		Fixed stitch auto on
		End sewing foot auto lift off

End foot lift		End sewing foot auto lift on
Hold foot lift		Hold sewing foot auto lift off
		Hold sewing foot auto lift on

2.6 Multi-segment sewing
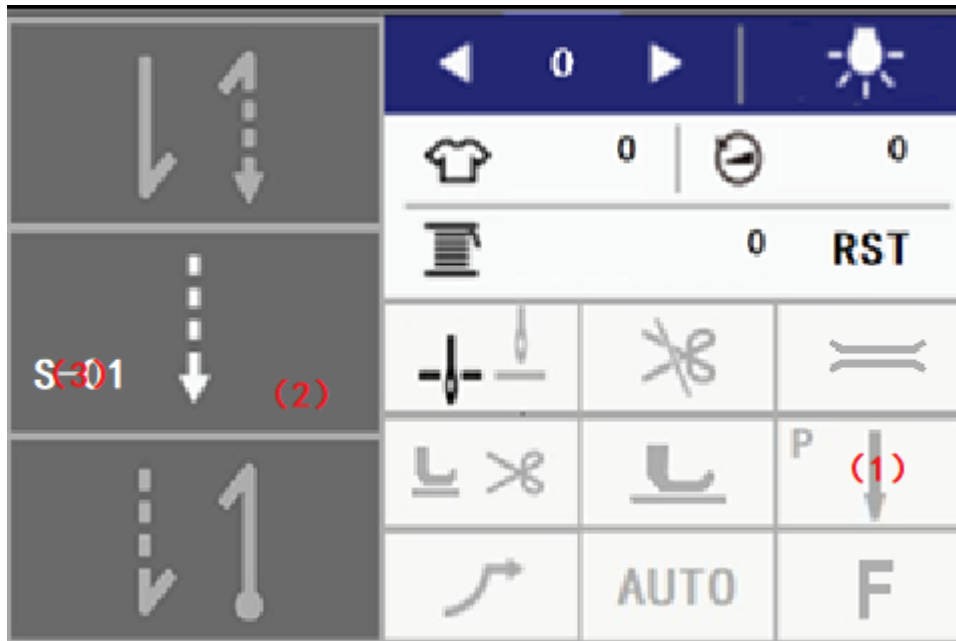
1	Enable or disable multi-segment sewing fun
2	Enter multi-segment sewing edit page
3	Show current segment

1	Enter S-01 segment edit page
2	Add segment
3	Delete segment

3 Expand function

3.1 Bobbin stitch counter

1	Show current Bobbin stitch counter value
2	Reset current Bobbin stitch counter value
3	: Bobbin stitch counter off A : Bobbin stitch counter A enable B : Bobbin stitch counter B enable C : Bobbin stitch counter C enable
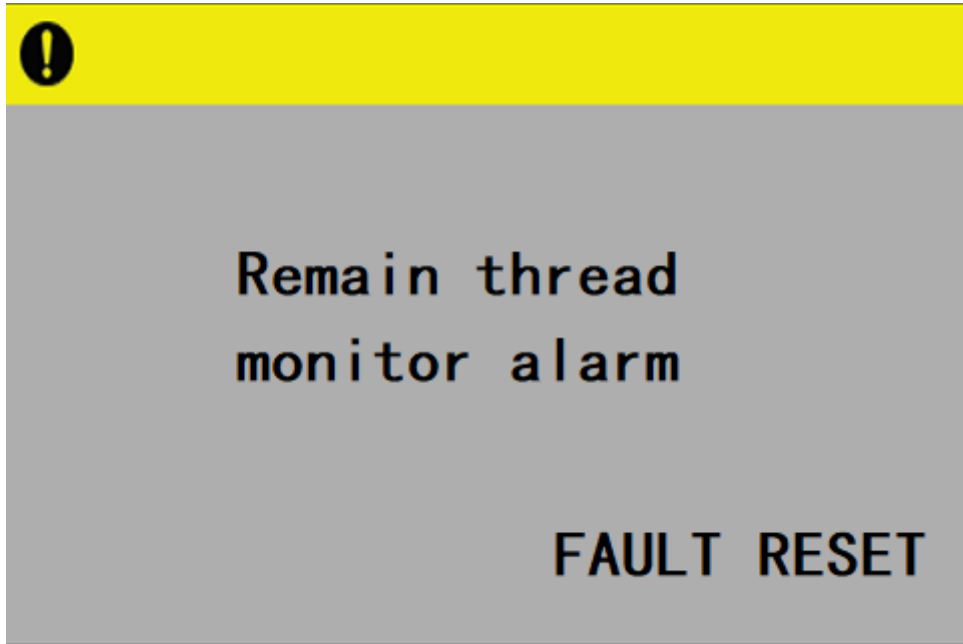
If Bobbin stitch counter reach "0" the machine will stop and alarm, so you can replace the bobbin, then simply click on the fault reset button to continue work.

3.2 Stroke Adjustment

Stroke Adjustment

Lower threshold	(4)
Upper threshold	(5)
Lower threshold spd	(6)
Upper threshold spd	(7)
Type of HP sign	
Cur Level (8) LIMIT_SPD (9)	

1	0:on stroke adjustment 1:off stroke adjustment
2	stroke adjustment entry speed, if cur speed > stroke adjustment entry speed, The motor slows down to stroke adjustment entry speed, and then turns on the stroke adjustment cylinder
3	0:manual off stroke adjustment cylinder. >0:after set stitches,the stroke adjustment cylinder auto off.
	 1.When current level is less than lower threshold(4),the max speed = lower threshold speed(6). 2.When current level is greater than Upper threshold(5),the max speed = Upper threshold speed(7). 3.when current level is greater than lower threshold(4)and less than Upper threshold(5), The max speed changes linearly according to the curve in the figure
8	When you turn the stroke adjustment knob, the current level changes in real time
9	Cur max speed.

3.3 Pedal

Pedal	↩
Num of Speed level	▲
Speed Curve	
Debouncing of Pos 0	
Debouncing of Pos -1	
Debouncing of Pos -2	
Pos -2 Voltage (1) Adjust (2)	▼

Pedal	↩
Pedal Type (3)	▲
Current pedal voltage (4)	
Aging work time	
Aging hold time	
Aging cycles number	
Aging en	▼
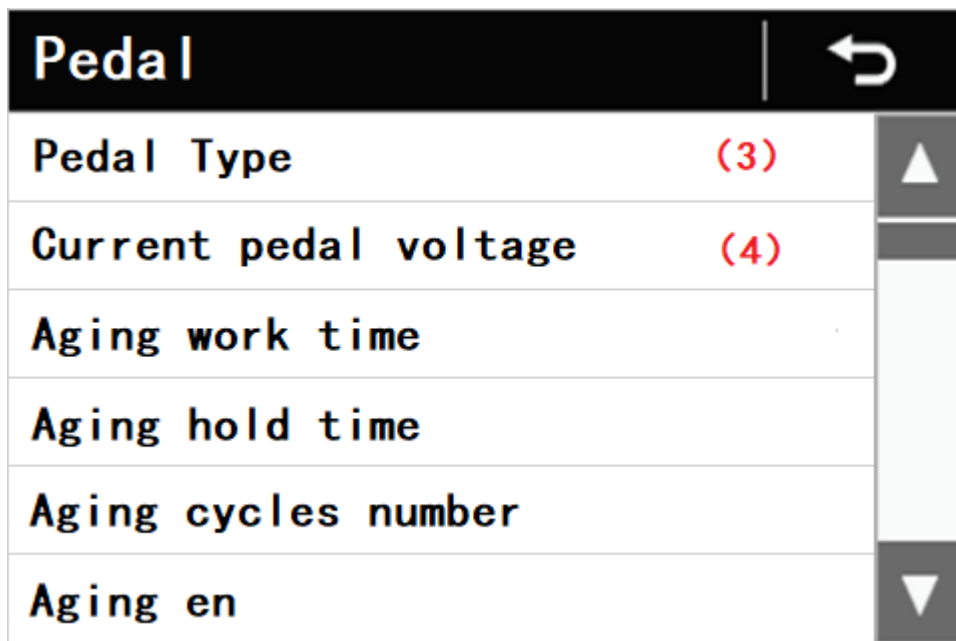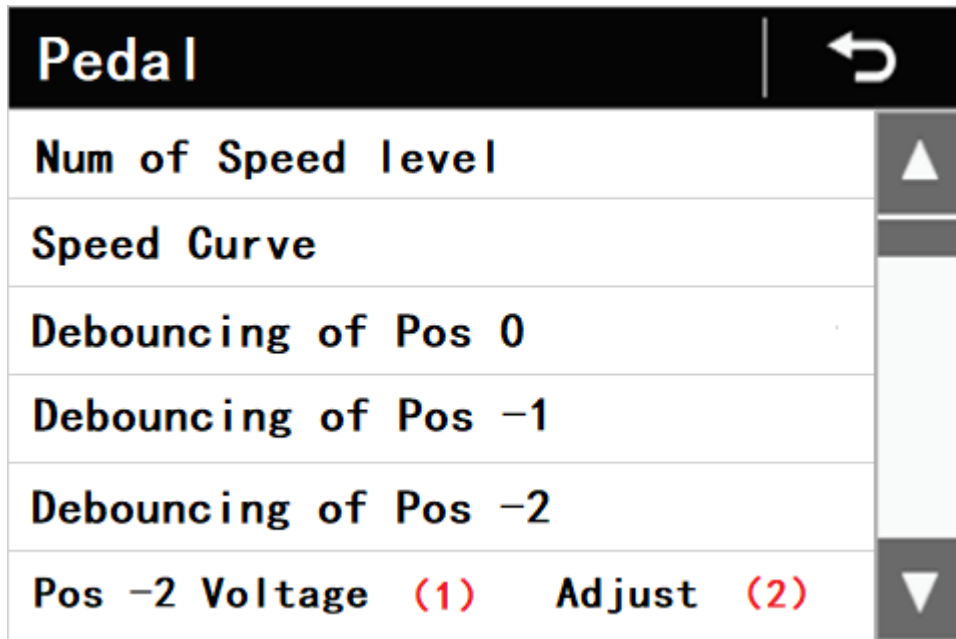
1	-2 position(cut trig pos) trigger voltage(1), If the current pedal voltage(3) is lower than this value, the wire trimming will be triggered.
2	-2 position(cut trig pos) trigger voltage adjustment value(2), Range -30~8.
3	0: Analog pedal 1: Digital pedal
4	Current pedal voltage disp.

3.4.1 Internal sensor origin setting

Position	↰
Ref Pos	▲
Bottom Dead Center	
Thread Top Dead Center	
Needle Top Dead Center	
Cur Pos	(1)
Calibrate Pos	(2) ▼

Reference Position	↰
Ref position	
Orig sign (3)	(4) OK
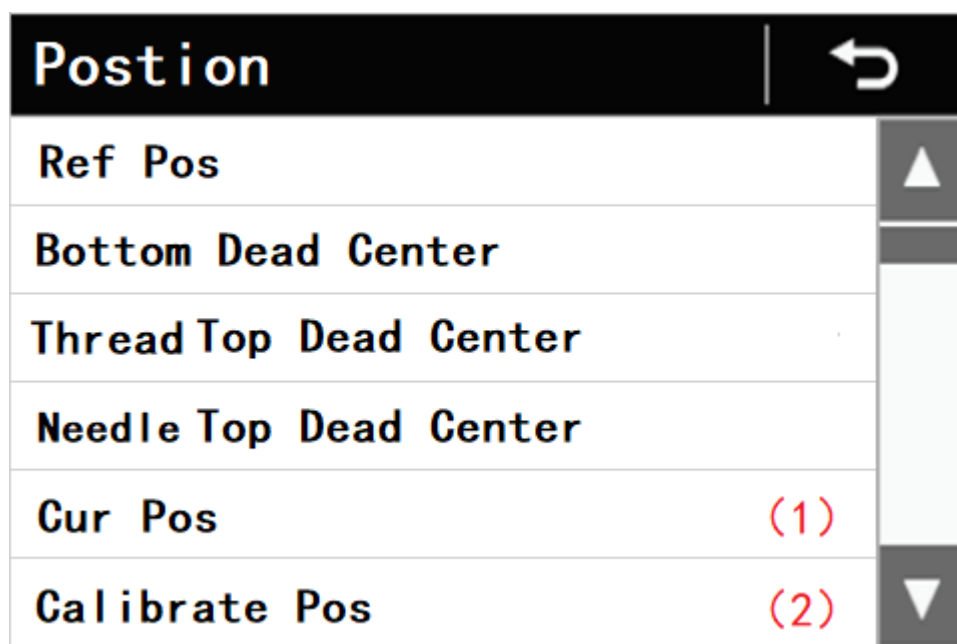
1	Current real-time position
2	Calibrate pos
	Turn the handwheel until the origin signal icon(3) turns from gray to white, and then continue to turn handwheel until the needle tip just touches the feed dog, And then touch OK Button(4).

3.4.2 External sensor origin setting

Motor	↩
Transmission Ratio	(1) ▲
Speed Limit DB3000	
Speed Limit DB2000	
Single Stitch Speed	
Manual Speed	
Motor Brake During Stop	▼

Motor	↩
Brake Current	▲
Response Pos Change	
Brake Time	
Before Brake Angle	
Extern Pos Sensor	(2)
Extra Torque Mode	▼

Postion

Ref Pos

Bottom Dead Center

Thread Top Dead Center

Needle Top Dead Center

Cur Pos

Calibrate Pos   (3)

Reference Position

Ref position

Orig sign   (4)   (5) OK
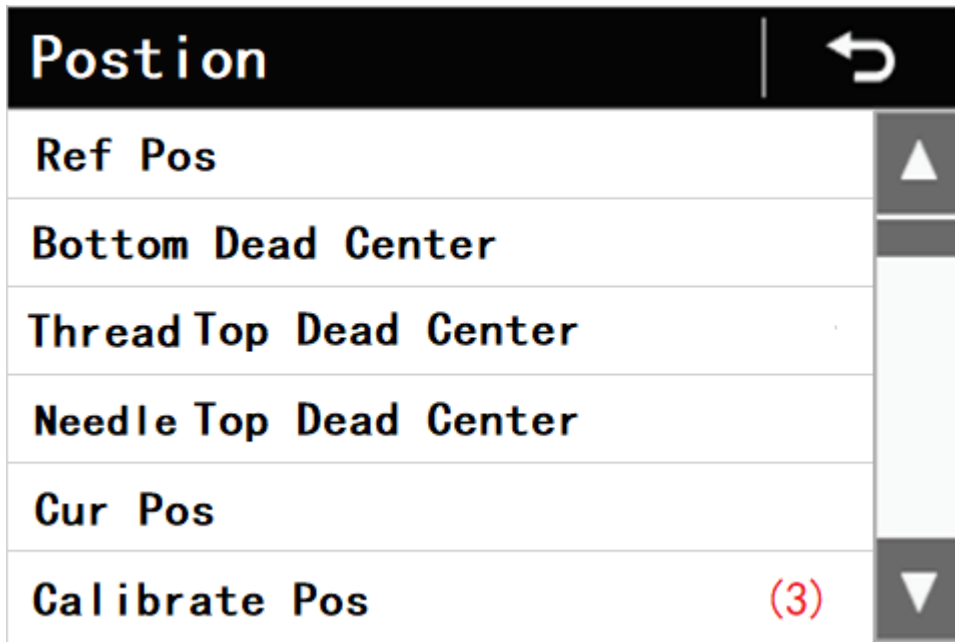
1	transmission ratio
	transmission ratio = Equipment wheel diameter / Motor wheel diameter * 100
2	OFF: Extern sensor disable
	ON : Extern sensor enable
3	Calibrate pos
	Turn the handwheel until the origin signal icon(4) turns from gray to white, and then continue to turn handwheel until the needle tip just touches the feed dog, And then touch OK Button(5).

3.5 How to obtain greater puncture force

Motor	↶
Maximum Speed	▲
Minimum Speed (1)	
Position Speed	
Acc Ramp	
Dec Ramp	
Direction	▼

Motor	↶
Transmission Ratio (2)	▲
Speed Limit DB3000	
Speed Limit DB2000	
Single Stitch Speed	
Manual Speed	
Motor Brake During Stop	▼

1	Set a higher minimum speed(1) to increase impact Turn on the extra torque mode(4) to increase the torque of the motor by increasing the maximum current of the motor, but at the same time the motor heating will become serious.
2	If the torque is still not enough after using method 1, we can change the transmission ratio of the equipment. By replacing a set of synchronous pulleys, we provide a set of synchronous pulleys with a transmission ratio of 1:1.54, which can magnify the torque of the motor by 1.54 times , But at the same time the maximum speed will also drop by 1.54 times. 1.Replace the synchronous pulley of the equipment and motor. 2.Install the external position sensor of the spindle. 3.Set transmission ratio(2) = 154. 4.On extern pos sensor(3).
3	Replace the motor with a larger torque, please consult the manufacturer for the specific model

3.6 How to set Motor model

Table	↩
Thread Monitor	▲
Carrier roller/puller/seam middle guide	
Sys Cfg	
Developer (1)	▼

Facturer Para	↩
Input Check	▲
Output Check	
Input Cfg	
Output Cfg (2)	▼

Facturer Para

Motor   (3)

Motor

Motor number   (4)

Flux weak

Flux weak depth
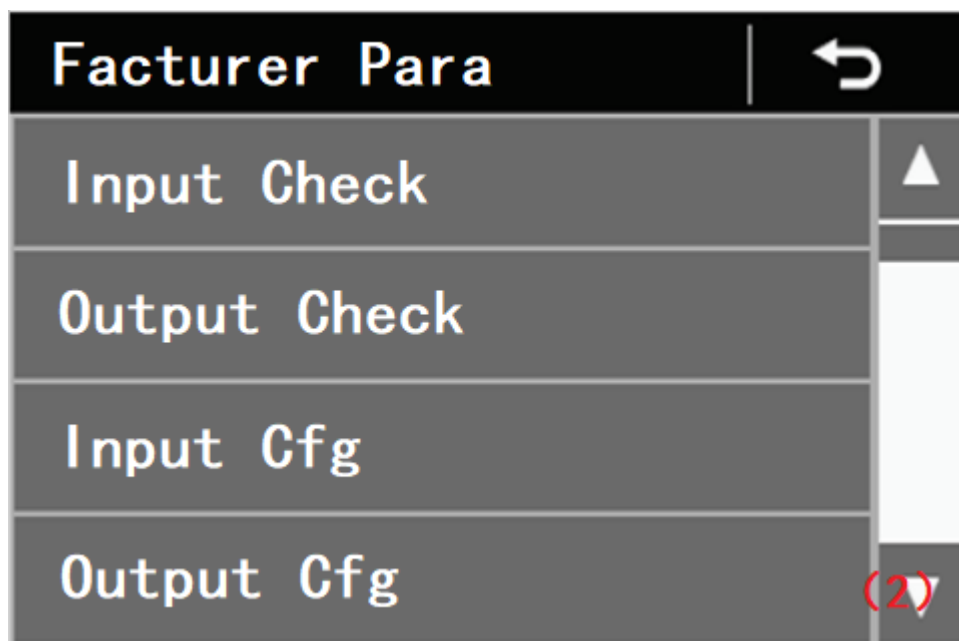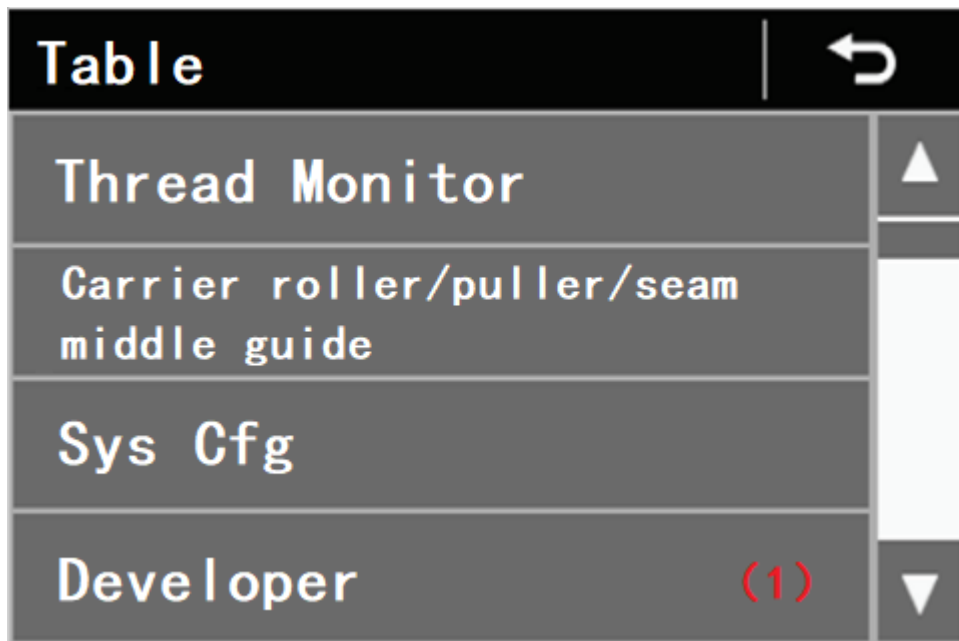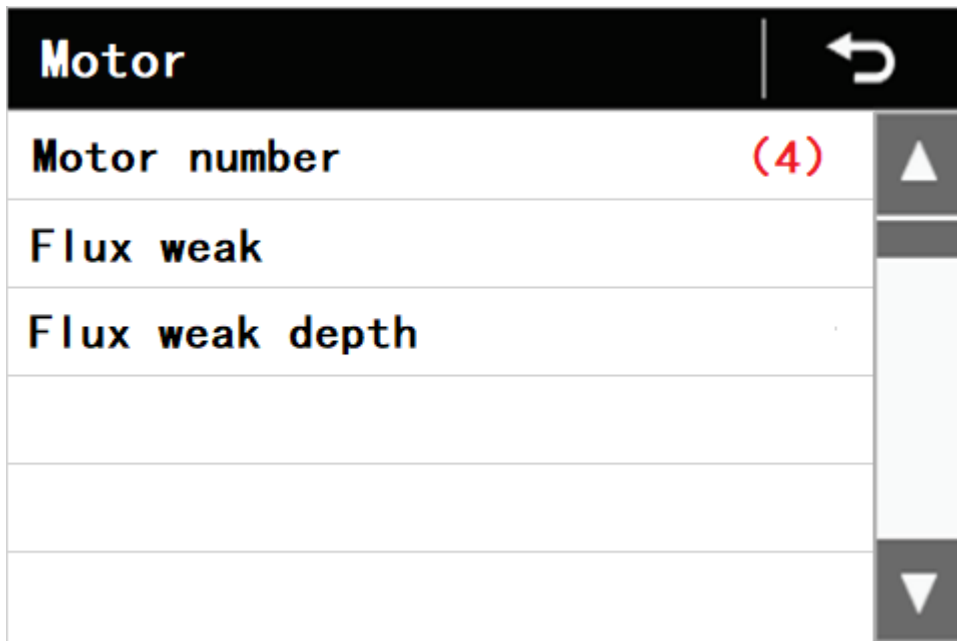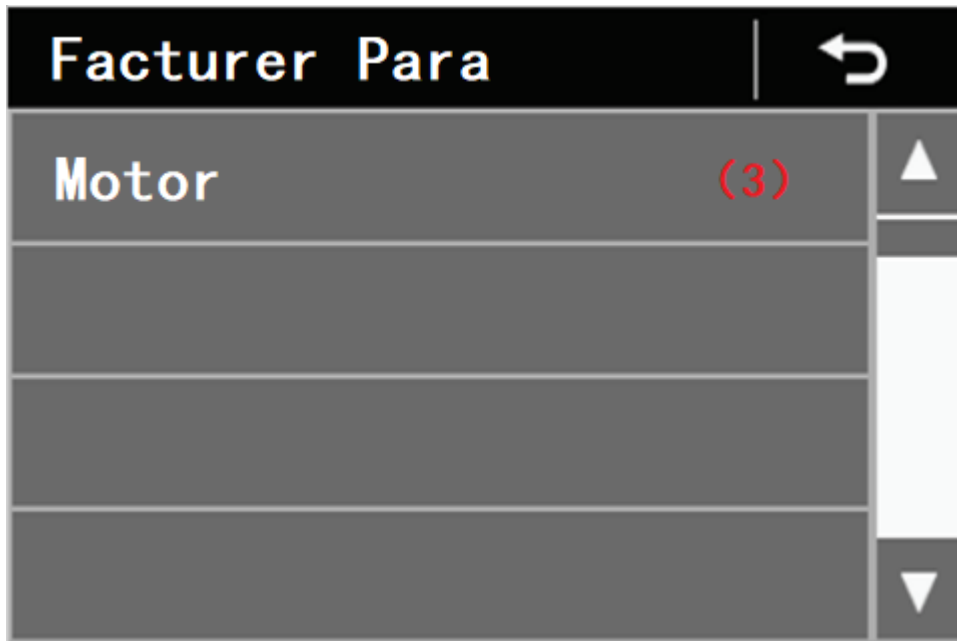
1	1. Find the developer(1) in the parameter table.
	2. Enter password 3692.
	3. Click next page(2).
	4. Click on Motor(3) to enter the motor parameter setting page.
	5. Click on Motor number(4) to set specific motor.
2	Motor number
	00: VS-M00,max speed 3000N/min , max torque 7.2 N/m
	01: VS-M01,max speed 3000N/min , max torque 7.2 N/m
	02: VS-M02,max speed 3000N/min , max torque 9.4 N/m
	03: VS-M03,max speed 2500N/min , max torque 12 N/m

4. Error codes

4.1 control unit errors

Error code	
201	Bus voltage is too high
202	Bus voltage is too low
203	24V power supply voltage is too high
204	24V power supply voltage is too low
206	Current sensor fault
208	IPM module overheated
300	Electric angle recognition failed, Check the motor wire
302	Motor encode fault
500	Controller software overcurrent
501	Controller hardware overcurrent
502	Motor leakage
503	Motor overload

4.2 device errors

Error code	
Key init state fault	Do not hold down the button when powering up
Equipment rollover	Righting equipment
Pedal signa over range	Replace pedal
Pedal init pos err	Don't step on the pedal when powering up
Up thread alarm	Upper thread is broken
Bottom thread alarm	Bottom thread is broken
Remain thread monitor alarm	replace the bobbin
External output short circuit	Check for external short circuit

Parameters List

Name	Min	Max	Default value	Unit	Description
Motor					
Maximum speed	500	3000	2500	rpm	
Minimum speed	100	300	150	rpm	
Position speed	180	1000	180	rpm	
Acc ramp	1	100	20	rpm/ms	
Dec ramp	1	100	30	rpm/ms	
Direction	0	1	0	-	Direction of rotation of motor 0 = CW 1 = CCW
Transmission ratio	1	9999	100	-	Transmission ratio = (Machine diameter/motor diameter)*100
Speed limit DB3000	180	3000	3000	rpm	
Speed limit DB3000	180	3000	1800	rpm	
Single stitch speed	180	500	180	rpm	
Manual speed	180	3000	180	rpm	
Motor brake during stop	0	1	0	-	Motor brake during normal stop 0:no brake torque 1:brake continuously active when stopped
Brake current	50	500	200	-	Brake current = (Brake torque/motor rated torque)*1000
Response pos Change	0	255	40	-	Reserved, invalid
Brake time	0	999	200	ms	Reserved, invalid
Before brake angel	20	40	20	°	
Extern pos sensor	0	1	0	-	Extern pos sensor 0:disable extern pos sensor 1:enable extern pos sensor

Name	Min	Max	Default value	Unit	Description
Soft start					
speed	180	1000	400	rpm	Soft start speed
Stitch	1	99	1	Stitches	Number of soft start stitches
Sewing Foot Lift					
enable	0	1	1	-	
Start delay after foot ready	0	255	80	ms	
Hold foot lift delay	0	255	40	ms	
End foot lift delay	0	255	50	ms	
Time 1	0	999	200	ms	Activation time of sewing foot lift Magnet in period t1
Time 1 duty	5	100	100	%	Duty cycle in period t1
Time 2	0	60000	10000	ms	Activation time of sewing foot lift Magnet in period t2
Time 2 duty	5	100	100	%	Duty cycle in period t2
Reversal					
Enable	0	1	1	-	Enable Reverse after end of sewing
Reversal angle	10	180	45	°	
Reversal start delay	10	255	40	ms	Waiting time until reversal
Thread cut					
Speed	100	750	150	rpm	Thread cut speed
Cutter pedal pos	0	1	0	-	Reserved, invalid
Switch on angle	0	359	25	°	Cut solenoid switch on angle Bottom dead center<Switch on angle <Switch off angle

Name	Min	Max	Default value	Unit	Description
Switch off angle	0	359	265	°	Cut solenoid switch off angle Switch on angle < Switch off angle < thread top dead center
Cutter time	100	1000	1000	ms	Maximum working time of cut solenoid, after cut auto off.

Thread Tension

Name	Min	Max	Default value	Unit	Description
Mode	0	3	2	-	Mode of thread tension and thread Tension reduction when sewing foot Lift is active. 0:No thread tension lift; 1:Thread tension lift in the seam; 2:Thread tension lift after thread cutting; 3:Thread tension lift in the seam And after thread cutting;
Switch on angle	0	359	255	°	thread tension switch off angle Bottom dead center < Switch on angle < Switch off angle
Switch off angle	0	359	325	°	thread tension switch off angle Switch on angle < Switch off angle < thread top dead center
Threading res Tension	0	1	0	-	Reserved, invalid
Hp add tension	0	1	1	-	Open additional thread tension During quick stroke adjustment 0:NO 1:YES
Start bartack add tension	0	1	0	-	Open additional thread tension During start bartacking 0:NO 1:YES
End bartack add tension	0	1	0	-	Open additional thread tension During end bartacking 0:NO 1:YES
Manual bartack Add tension	0	1	0	-	Open additional thread tension During manual bartacking 0:NO 1:YES

Name	Min	Max	Default value	Unit	Description
Thread clamp add tension	0	1	0	-	Open additional thread tension For thread clamp 0:NO 1:YES
Soft start add tension	0	1	0	-	Open additional thread tension During soft start 0:NO 1:YES
Stitch short add tension	0	1	0	-	Reserved, invalid
Single stitch Add tension	0	1	0	-	Reserved, invalid
Manual add Tension	0	1	0	-	Open additional thread tension for extern key 0:NO 1:YES
Time 1	0	999	40	ms	Activation time of thread tension Magnet in period t1
Time 1 duty	5	100	100	%	Duty cycle in period t1
Time 2	0	60000	0	ms	Activation time of thread tension Magnet in period t2.(if 0,the thread tension magnet remains continuously switched on)
Time2 duty	5	100	100	%	Duty cycle in period t2

Pedal

Name	Min	Max	Default value	Unit	Description
Num of speed level	0	64	0	-	Reserved, invalid
Speed Curve	0	7	0	-	Reserved, invalid
Debouncing of Pos 0	1	255	5	ms	When the pedal is at the 0 position for more than this time, hold will be triggered
Debouncing of Pos -1()	1	255	80	ms	When the pedal is at the -1 position for more than this time, foot lift will be triggered
Debouncing of Pos -2	1	255	100	ms	When the pedal is at the -2 position for more than this time, cutting will be triggered
Pos -2 voltage adjust	-5	5	-4	0.01V	Adjust the sensitivity of -2 position trigger(cutting), the smaller the value,

Name	Min	Max	Default value	Unit	Description
					the lower the sensitivity.
Pedal type	0	1	0	-	0: Analog pedal 1:digital pedal

Position

Name	Min	Max	Default value	Unit	Description
Ref pos	0	359	-	°	Don't modify
Bottom dead center	0	359	19	°	Needle in the low position (bottom dead center)
Thread top dead center	0	359	326	°	Thread lever at top dead center
Needle top dead center	0	359	245	°	Threading position (needle thread)
Cur pos	0	359	-	°	Display the current real-time angle
Calibrate Pos	-	-	-	-	Manually correct the position, Refer to the user manual for specific operations

Start bartack

Name	Min	Max	Default value	Unit	Description
Switch on angle	-100	60	10	°	Feed-forward angle when the bartack Magnet is switched on (Switching from forward to backward during bartacking)
Switch off angle	-100	60	-75	°	Feed-forward angle when the bartack Magnet is switched off (Switching from backward to forward during bartacking)
Stop When pedal pos 0	0	1	0	-	Reserved, invalid
Mode of end bartack	0	2	0	-	0:Sewing continues after end; 1:Machine stop and must be restarted using the pedal; 2:Thread cutting after after start bartack.;
Speed hold time	0	500	0	ms	Delay time to speed release after start bartack

Manual bartack

Name	Min	Max	Default value	Unit	Description
Mode	-	-	-	-	0:Manual bartack engages immediately 1: Manual bartack engages

Name	Min	Max	Default value	Unit	Description
					depending angle
Switch on angle	0	60	10	°	
Switch off angle	0	60	10	°	
Speed Limit mode	300	3000	0	rpm	Manual bartack speed limit, if = 0 Speed limit invalid

End bartack

Name	Min	Max	Default value	Unit	Description
Switch on angle	-100	60	10	°	Feed-forward angle when the bartack Magnet is switched on (Switching from forward to backward during bartacking)
Switch off angle	-100	60	-75	°	Feed-forward angle when the bartack Magnet is switched off (Switching from backward to forward during bartacking)
Hold on fun	0	1	0	-	Reserved, invalid

Ornamental bartack

Name	Min	Max	Default value	Unit	Description
Enable	0	1	1	-	0:Off 1:On
Speed	180	1500	800	rpm	Speed of ornamental-stitch bartack
Hold time	0	1000	50	ms	Ending time during ornamental-stitch bartack

Darning

Name	Min	Max	Default value	Unit	Description
Enable	0	1	0	-	Reserved, invalid
Speed	300	3000	2800	rpm	Reserved, invalid
Speed mode	0	1	0	-	Reserved, invalid
Switch on angle	0	254	10	°	Reserved, invalid
Switch off angel	0	254	10	°	Reserved, invalid

Bartack

Name	Min	Max	Default value	Unit	Description
Spd dec when feed dog is repositioned	0	1	1	-	Speed decrease when feed dog is repositioned
Speed	180	3000	500	rpm	Level to which the speed is supposed to be reduced when the feed dog is repositioned
Time1	0	999	100	ms	Activation time of bartack magnet in period t1
Time1 duty	5	100	100	%	Duty cycle in period t1
Time2	0	60000	30000	ms	Activation time of bartack magnet in period t2.(if 0,the bartack magnet remains continuously switched on)
Time2 duty	5	100	100	%	Duty cycle in period t2

Stroke adjustment

Name	Min	Max	Default value	Unit	Description
Enable	0	1	1	-	0:Off 1:On
Speed	180	3000	1800	rpm	Stroke adjustment entry speed
Type of potentiometer	0	9999	0	-	Reserved, invalid
Num stitches for HP auto off	0	9999	0	Stitches	Number of stitches for automatic Switch-off of quick stroke adjustment(when 0,quick stroke adjustment is deactivated)
Speed limit mode	0	1	0	-	Reserved, invalid
Spd hold time after HP off	0	6000	100	ms	Delay time to speed release after automatic Switch-off of quick stroke adjustment
Lower threshold	0	20	5	-	
Upper threshold	0	20	17	-	
Lower threshold spd	180	3000	3000	rpm	
Upper threshold spd	180	3000	1800	rpm	
Type of HP sign	0	1	0	-	0:Store signal

Name	Min	Max	Default value	Unit	Description
					1:No store signal
Cur Level	0	20	-	-	Display of current level, The greater the level, the greater the stroke of the presser foot
Limit_spd	180	3000	-	-	Maximum speed allowed by current level

Stitch length switch

Name	Min	Max	Default value	Unit	Description
Spd limit for long stitch length	180	3000	0	rpm	Speed limit for long stitch length, (when 0,speed limit invalid)
Stitch length at bartack	0	2	0	-	0:Preset stitch length(Long/Normal) 1:Normal stitch length 2:Long stitch length
Cur Stitch length	0	1	0	-	0:Normal stitch length 1:Long stitch length
Stitch shorting at Seam begining	0	1	0	-	Reserved, invalid
Stitch shorting at Thread cutting	0	1	0	-	0:Preset stitch length(Long/Normal) 1:Short stitch length

Needle cool

Name	Min	Max	Default value	Unit	Description
Needle cool mode	0	1	0	-	0:Normal needle cooling 1:Speed-dependent needle cooling
Switch off delay Of needle cool	0	6000	2500	ms	Switch off delay of needle cooling
Spd for switch On needle cool	180	3000	2000	rpm	Speed for switching on needle cooling
Needle cool during foot lift	0	1	0	-	0:Off 1:On
Needle cool	0	1	0	-	0:Off 1:On

Thread clamp

Name	Min	Max	Default value	Unit	Description
Mode	0	2	0	-	0:Off 1:only TC 2:TC and FL
Option	0	3	0	-	0:Thread clamp only at seam begining 1: Thread clamp at seam beginning and reverse

Name	Min	Max	Default value	Unit	Description
					2: Thread clamp at seam beginning and during sewing foot lift 3: Thread clamp at seam beginning and during reverse and sewing foot lift
FK switch on angle	0	359	75	°	
FK switch on angle	0	359	215	°	
FL switch on angle	0	359	60	-	
FL switch off angle	0	359	120	-	
FL switch on duty	0	100	100	%	
NSB	-	-	-	-	Reserved, invalid
Switch on angle of add clamp	-	-	-	-	Reserved, invalid
Switch off angle Of add clamp	-	-	-	-	Reserved, invalid
Switch on angle of thread advancing device	-	-	-	-	Reserved, invalid
Switch off angle of thread advancing device	-	-	-	-	Reserved, invalid
Switch on of thread tension lift	-	-	-	-	Reserved, invalid
Switch off of thread tension lift	-	-	-	-	Reserved, invalid
Time 1	-	-	-	-	Reserved, invalid
Time 1 duty	-	-	-	-	Reserved, invalid
Time 2	-	-	-	-	Reserved, invalid

Name	Min	Max	Default value	Unit	Description
Time 2 duty	-	-	-	-	Reserved, invalid

Light barrier

Name	Min	Max	Default value	Unit	Description
Equalizing stitches for normal stitch length	0	255	0	stitches	When detecting the disappearance of the barrier signal, continue to run to Equalizing stitches and then end the sewing
Equalizing stitches for long Stitch length	0	255	0	stitches	When detecting the disappearance of the barrier signal, continue to run to Equalizing stitches and then end the sewing
Num of barrier seam	0	255	1	stitches	Reserved, invalid
Equalizing stitches for knitted garment filter	0	255	0	stitches	Reserved, invalid
Spd for barrier equalizing stitches	180	3000	1000	rpm	
Barrier mode	1	3	3	-	1:Seam beginning detection 1:Seam end detection 3:Seam beginning & seam end detection
Mode for seam begining	0	1	0	-	Reserved, invalid
Knitted garment filter	0	1	0	-	Reserved, invalid
Light barrier detection	0	1	0	-	0:Bright 1:Dark
Auto	0	1	0	-	0:Off 1: Semi-automatic mode 2: Fully automatic mode

Thread Wiper

Name	Min	Max	Default value	Unit	Description
Enable	0	1	0	-	0:Off 1:On
Switch on time	10	255	100	ms	Switch-on period for thread wiper
No foot lift time	10	255	100	ms	When thread wiper off, after No foot lift time ,the foot is allowed to lift

Name	Min	Max	Preset value	Unit	Description
## Thread Monitor					
Enable	0	4	0	-	Bobbin stitch counter/remaining thread monitor 0:Off 1:Bobbin stitch counter A 2:Bobbin stitch counter B 3:Bobbin stitch counter C 4:remaining thread monitor
Bobbin stitch Counter A	10	30000	6000	stitches	Reset value of bobbin stitch counter A
Bobbin stitch Counter B	10	30000	6000	stitches	Reset value of bobbin stitch counter B
Bobbin stitch Counter C	10	30000	6000	stitches	Reset value of bobbin stitch counter C
Factor of bobbin Stitch counter	1	255	10	-	Reserved, invalid
Num of stitches for the remain Thread monitor	0	9999	0	stitches	Number of stitches for the remaining thread monitor
Motor stop when cnt reaches 0	0	1	1	-	Stop sewing motor when the counter Reaches 0 0:Off 1:On
Seam cnt enable	0	1	1	-	Counter plus one after cutting 0:Off 1:On
Needle thread monitor up	0	1	0	-	Reserved, invalid
Up monitor active spd	180	3000	180	rpm	Reserved, invalid
Up monitor Active stitches	0	255	2	stitches	Reserved, invalid
Up monitor sign filter	0	1000	3	ms	Reserved, invalid
Needle thread monitor down	0	1	0	-	Reserved, invalid
Down monitor Active spd	180	3000	180	rpm	Reserved, invalid
Down monitor active stitches	0	1000	3	ms	Reserved, invalid

Name	Min	Max	Preset value	Unit	Description
Carrier roller/puller/seam middle guide					
Seam middle guide follow hp	0	1	0	-	0:On 1:Off
Sys cfg					
Brand number	-	-	-	-	Factory setting, users should not modify
Sys para reset	-	-	-	-	Parameter reset to factory settings
WIFI	-	-	-	-	WIFI settings
Language	0	1	0	-	0: Chinese 1:English
System info	-	-	-	-	Display current software information
Device	0	15	0	-	Select the specified equipment, the corresponding parameters will be automatically modified
Developer, Enter after entering 3692					
Input check	-	-	-	-	Check external input signal
Output check	-	-	-	-	Check external output
Input cfg	-	-	-	-	Configure the corresponding function for the external input port
Output cfg	-	-	-	-	Configure the corresponding function for the external output port
Motor	0	10	0	-	0: VS-M00,max speed 3000N/min，max torque 7.2 N/m 1: VS-M01,max speed 3000N/min，max torque 7.2 N/m 2: VS-M02,max speed 3000N/min，max torque 9.4 N/m 3: VS-M03,max speed 2500N/min，max torque 12 N/m 4~9: Reserved

NOTES

Dealer: