ENGLISH

# L-1D Series
## INSTRUCTION MANUAL
## (Electrical)

# CONTENTS

# 1. Safety instruction

Please read the operation manual and related sewing machinery datasheet carefully before correct use.

1.1 (1) Power voltage and frequence: 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.

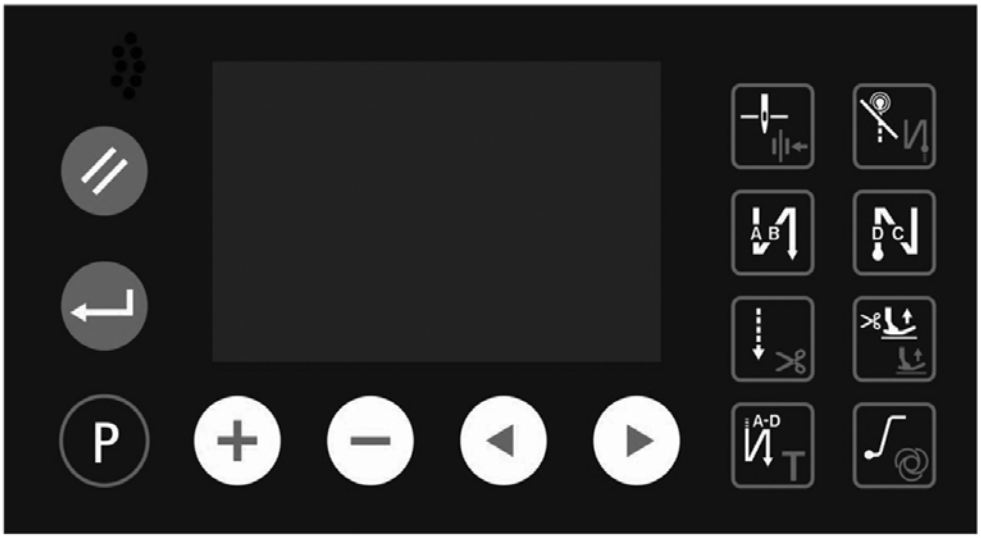
1.3 Please turn off the power while repairing or wearing needle in order to protect operater's safty.

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. Operation box use




| NO | Function | Key | Describe |
|---|---|---|---|
| 1 | Reset setting | | Under standby interface, long press the button for 1.5 seconds |
| 2 | Identify key | | 1、 Identify key<br>2、 for the belt clip line function model, the strength of long press this button to display the thread clamp, LCD display "[_7]"), press the key again to exit<br>3、 Unlocking |
| 3 | Parameters setting key | P | 1. Enter different parameter levels (parameters are divided into 3 levels)In the sewing setting interface, press the "P" key to enter (parameter interface), and the level I parameter in the parameter list will be displayed.<br>In the sewing setting interface, long press the "P" key to enter (password input interface). After entering the correct maintenance password, press the "P" key to enter (parameter interface). At this time, the level I and II parameters in the parameter list will be displayed. Level 2 password: 1111 |
| 4 | add-substract key | + − | Under normal sewing interface<br>1. Adjust the stitch size<br>2. According to several numerical and subtract ( key seam free mode into the display number segment)<br>3. The parameter value plus or minus<br>4. Pattern edit value add and subtract |
| 5 | Left or right key | ◀ ▶ | 1. The left and right keys is use for speed adjust function under the free sewing interface, the left key to reduce the speed and the right key increase the speed.<br>2.Press the " " key and input "3333" in the free sewing interface, tacking sewing stitch setting use for the left and right<br>3.Under normal sewing interface display around several switch<br>4. Figure shows around several switch gap setting |

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| 6 | Stop needle selection key.Thread clamp function |  | 1、Up and down needle selection key<br>2、Thread clamp function on and off.Electronic tension is enabled after open it |
| 7 | Anti-nest function.Close stitch function |  | 1、Anti-nest function on and off,is suitable for the machine with Anti-nest equipment<br>2、Close stitch function on and off.After opening,add one more stitch,Enhance the reinforcing-sewing effect and reduce the thread |
| 8 | Front Reinforcing-sewing |  | circulation：front<br>Reinforcing-sewing / front double<br>Reinforcing-sewing /front Four solid Reinforcing-sewing /turn off |
| 9 | Back Reinforcing-sewing |  | circulation：back<br>Reinforcing-sewing / back double<br>Reinforcing-sewing /back Four solid Reinforcing-sewing /turn off |
| 10 | Three - segment mode switching.Scissors function key |  | 1、Short press to switch one-stitch sewing/multi-stitch sewing/free sewing/circulation:w sewing Free seam<br>2、Scissors function on and off |
| 11 | Presser.foot function cycle key |  | Foot presser function cycle: middle stop lifting foot/cutting line after lifting foot/middle stop cutting line after lifting foot/closing |
| 12 | Fixed seam pattern key.Motor.Angle adjustment/trial teaching function |  | 1、After this function is enabled, the front and rear fixed seams can be sewn according to the self-editing pattern<br>2、Debug mode shortcut key in free seam mode (long press for more than 3 seconds)<br>3、In fixed-length seam mode, try teaching mode (press for longer than 1 second) |
| 13 | Slow start function.Trigger function key Settings |  | 1、Slow start on and off<br>2、Effective (on/off) in fixed-length seam mode (one-section seam, multi-section seam, multi-section seam self-knitting pattern)<br>3、W seam mode Open automatically |

# 3. Mode setting

**Debug mode：** After entering the normal sewing mode, press the right side 3 seconds“ ”, enter debug mode.If you want this pattern to return to normal mode，press “ ”key to exit into normal mode

**Stitch length Adjustment Mode：** After entering sewing mode normally, long press“ ”3seconds , Entering debug mode , press“＋”or“－”, switch to parameter P-6, press ,then the mcahine can be zero position correction,switch to parameter P-7, press can correct the go-stitch lemgth ;switch to parameter P-8, press can correct the reverse-stitch length, all the corrections are savec to exit by press 。

**Restore Factory settings ：** **In normal sewing mode, long press the “ ” button for more than 1.5 seconds, “ yes ” will be displayed.[Then press “+ -”again to adjust to“no”], and press the “ ” button to confirm that the direct parameters are restored to the factory mode.**

**Pattern editing settings interface ：** **After entering the normal sewing mode, press the“P + ”Key for 2 seconds，screen display “d1”，press“+-” toggle the d1-d9 pattern，Select the pattern to be set Press “ ” to enter the setting，screen display “1 3.0 01”，In this case, the number of stitches and the stitch length of the first stage can be carried outIn this case, the number of stitches and the stitch length of the first stage can be carried out，Press left or right to select the item to be set ;The first paragraph is set up，Press left or right to switch to the left，the number flashes，Press the plus or minus key to switch to other segments settings，If the current number of stitches is zero，the next setting can not be made ；After all the needle distance and frame count settings are complete, press the “ ” key to save and return to the "d1" screen，Press the“P” key to exit without saving。If you want this pattern to return to normal mode，press “P” key to exit into normal mode.**

# 4. System parameter table ：

| Num | Project | Content | Setting range | step pitch | The default value | Level |
|---|---|---|---|---|---|---|
| P-01 | Sewing speed | Set sewing speed | 200~5000(rpm) | 100 | 4000 | 1 |
| P-02 | Soft-start function | 1~9: Soft start stitches | 0~9 | 1 | 2 | 1 |
| P-03 | Decorativetacking sewing setting | Can realize perfect decorative tacking sewing stitch funciton 0: Invalid 1: Valid | 0/1 | 1 | 0 | 1 |
| P-04 | Fixed-length seam sewing speed | Set fixed-length seam sewing speed | 200~4000(rpm) | 100 | 3000 | 1 |
| P-05 | Easy sewing mode setting | Easy mode setting 0: Invalid 1: Valid | 0/1 | 1 | 0 | 1 |
| P-06 | Zero.pitch correction value | When the needle pitch is set to 0mm, fine the value so that the actual sewing needle pitch is zero | 50~150 | 1 | 100 | 1 |
| P-07 | Positive needle distance correction value | Magnification positive sewing distance (Sewing needle fixed distance) | 50~150(%) | 1 | 100 | 1 |
| P-08 | Anti-needle distance correction value | Enlarge reverse stitches Distance Scale (Sewing needle fixed distance) | 50~150(%) | 1 | 100 | 1 |
| P-09 | Back stitch speed limitation | can keep needle from breaking while backstitching | 500~1500(rpm) | 50 | 800 | 1 |

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|---|---|---|---|---|---|---|
| P-10 | Set the length of the stitch from the set number | 0:Set the number of stitches to set the value<br>1:When the length is set to self-made, the number is the number of the pattern, that is, the total number of stitches is the number of stitches × set the value | 0/1 | 1 | 1 | 1 |
| P-12 | Height of middle presser.foot lifting (valid stepping) | Setting height of presser foot lifting when sewing half | 0~100 | 1 | 60 | 2 |
| P-13 | Maximum height of presser foot lifting (valid stepping) | Setting Maximum height of presser foot lifting after trimming | 0~100 | 1 | 50 | 2 |
| P-14 | Speed of presser foot lifting (valid stepping) | Stepping speed of presser foot lifting | 20~300(rpm) | 10 | 150 | 2 |
| P-15 | Speed of presser foot releasing (valid stepping) | Stepping speed of presser foot releasing | 20~300(rpm) | 10 | 150 | 2 |
| P-16 | Output duty cycle of presser foot soft drop | Output duty cycle of presser foot soft drop | 0~100 | 1 | 0 | 2 |
| P-17 | Cut and loosen duty cycle | Cutting line for electromagnet:<br>When the shear line loose line duty ratio (too small will affect the shear line electromagnet suction strength)<br>Cutting line for step:<br>Loose line efforts to adjust the (light) | 0~100 | 1 | 50 | 2 |
| P-18 | Front reinforcing-sewing setting after the front fixed joint is connected | Immediately after the end of front reinforcing-sewing, step on the cutting line without the function setting of back reinforcing-sewing 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |
| P-19 | Solid after before sewing stop | 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |
| P-20 | Function selection of machine head button | 0: invalid 1: Manual thread cutting while standby 2: Manual presser foot after trimming | 0/1/2 | 1 | 0 | 1 |
| P-21 | soft start speed 1 | speed of the 1 st needle of soft start | 100~3000(rpm) | 50 | 400 | 1 |
| P-22 | soft start speed 2 | speed of the 2 nd needle of soft start | 100~3000(rpm) | 50 | 1000 | 1 |
| P-23 | soft start speed 3 | speed of the 3 rd~9 th needle of soft start | 100~3000(rpm) | 50 | 1500 | 1 |
| P-24 | Presser foot soft lowering function | Setting to protect damaged the fabric to slow down the presser foot lowering speed | 0/1 | 1 | 1 | 1 |
| P-25 | Presser foot lift function | 0: unavailable 1: available | 0/1/2 | 1 | 1 | 1 |
| P-26 | Function of over thickness | Setting the function of over thickness 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |

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|---|---|---|---|---|---|---|
| P-27 | Power on and positioning | The function setting of automatically finding the needle position when the power is on 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |
| P-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 | 0/1/2 | 1 | 0 | 1 |
| P-29 | Presser foot soft lowering time | To set presser foot soft lowering time The longer time the lower speed of the presser foot | 100~500(ms) | 5 | 80 | 2 |
| P-30 | Baseline count enable | 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |
| P-31 | Baseline initial value setting | Baseline initial value setting | 200~4000(0.1m) | 20 | 1600 | 1 |
| P-32 | Stop time of decorative tacking sewing (effective for only pressor foot) | Stop time of decorative tacking sewing setting | 5~500(ms) | 5 | 50 | 1 |
| P-34 | Standard joint speed mode selection | Select 0 automatic for standard joint speed mode; 1 pedal control | 0/1 | 1 | 0 | 2 |
| P-35 | multiple ratio of counting by piece | Setting of multiple ratio of counting by piece | 0~50 | 1 | 0 | 1 |
| P-36 | Setting initial value of counting by piece | Setting initial value of counting by piece | 0~1000 | 5 | 100 | 1 |
| P-37 | Time of thread wiper | Time of thread wiper | 0~800(ms) | 10 | 40 | 2 |
| P-38 | Setting function of choosing counting by piece | 0: add 1: subtract | 0/1 | 1 | 0 | 1 |
| P-39 | Turn off time before presser foot soft drop | Turn off time before presser foot soft drop | 0~50 | 1 | 12 | 2 |
| P-41 | Low speed | The lowest speed of pedal | 100~500(rpm) | 10 | 200 | 1 |
| P-42 | Pedal curve selection | Pedal speed adjustment 0: normal 1: Slow acceleration 2: Quick acceleration | 0/1/2 | 1 | 2 | 1 |
| P-44 | thread-cutting speed | thread-cutting speed | 100~500(rpm) | 10 | 250 | 1 |
| P-45 | Back-tracking speed limit function | Back-tracking speed processing can prevent reverse sewing needle breakage 0:1: infinite speed limit 2: the speed limit | 0/1/2 | 1 | 0 | 1 |
| P-46 | presser foot lifting delays sewing | delay with presser foot lowered | 0~800(ms) | 10 | 100 | 2 |
| P-47 | When running, the knee presses the foot to judge the speed | When running, the knee presses the foot to judge the speed | 200~1000(rpm) | 50 | 500 | 2 |
| P-48 | When running the knee is raised by the foot | When running the knee is raised by the foot | 0~100 | 1 | 0 | 2 |

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|---|---|---|---|---|---|---|
| P-49 | Press foot holding time | Lift the pressure foot after holding time to force off | 1~60(s) | 1 | 25 | 2 |
| P-50 | output time of total pressure of presser foot lifting | output time of total pressure of presser foot lifting | 0~800(ms) | 10 | 150 | 2 |
| P-51 | output duty cycle of presser foot lifting<br>hold time of presser foot lifting | output duty cycle of presser foot lifting<br>hold time of presser foot lifting | 0~100 | 1 | 40 | 2 |
| P-53 | starting reinforcing-sewing speed | starting reinforcing-sewing speed | 100~3000(rpm) | 50 | 1800 | 1 |
| P-54 | Compensation coefficient of front tacking sewing | Compensation coefficient of front tacking sewing | 80~120 | 1 | 100 | 1 |
| P-55 | Compensation coefficient of front back tacking sewing | Compensation coefficient of front back tacking sewing | 80~120 | 1 | 100 | 1 |
| P-56 | ending reinforcing-sewing speed | ending reinforcing-sewing speed | 100~3000(rpm) | 50 | 1800 | 1 |
| P-57 | starting reinforcing-sewing of front tacking sewing | starting reinforcing-sewing of front tacking sewing | 80~120 | 1 | 100 | 1 |
| P-58 | starting reinforcing-sewing of front back tacking sewing | starting reinforcing-sewing of front back tacking sewing | 80~120 | 1 | 100 | 1 |
| P-59 | Continuous reinforcing-sewing speed | Continuous reinforcing-sewing speed | 100~3000(rpm) | 50 | 1800 | 1 |
| P-60 | Bartack stitch cancel speed limit | 0: The software has speed limited 1: No speedlimited | 0/1 | 1 | 0 | 1 |
| P-61 | A switch to cancel the angle limit when change stitch length | 0: Change the stitch length within the limiting angle 1: Vhange stitch length at any angle (The stitch length may not coincide, or the needle may break) | 0/1 | 1 | 0 | 1 |
| P-62 | Pedal travel upon start | Pedal position upon start (Travel relative to medium pedal) | 10~50(0.1 度) | 1 | 25 | 2 |
| P-63 | Pedal travel upon acceleration | Pedal position upon start acceleration (Travel relative to medium pedal) | 10~100(0.1 度) | 1 | 40 | 2 |
| P-64 | Pedal travel at highest rotation speed | Pedal position at highest rotating speed (Travel relative to medium pedal) | 10~150(0.1 度) | 1 | 110 | 2 |
| P-65 | Pedal travel upon presser foot lift | Pedal position upon pedal lift (Travel relative to medium pedal) | -100~-10(0.1 度) | 1 | -30 | 2 |
| P-67 | Pedal travel 1 upon thread trimming | Pedal position upon start trimming without presser foot function Travel relative to medium pedal | -100~-10(0.1 度) | 1 | -30 | 2 |
| P-68 | Pedal travel 2 upon thread trimming | Pedal position upon start thread trimming with presser foot function (Travel relative to medium pedal) | -100~-10(0.1 度) | 1 | -60 | 2 |

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|---|---|---|---|---|---|---|
| P-69 | Down needle positioning position | To adjust down needle position | 0~240 | 1 | 165 | 1 |
| P-70 | Reverse needle lift function | Reversal of needle lift function after thread trimming 0: unavailable 1: available | 0/1 | 1 | 0 | 1 |
| P-71 | Reversal of needle lift angle | Reversal of needle lift angle | 0~45(度) | 1 | 20 | 1 |
| P-72 | Thread clamp strength adjustment | Adjust the thread clamp strength size 0: Cli p line function is invalid 1~9: Three Intensity Adjustment | 0~9 | 1 | 7 | 1 |
| P-73 | Thread pressing actuation angle | Thread pressing actuation angle | 10~150(度) | 5 | 120 | 1 |
| P-74 | Thread pressing release angle | Thread pressing release angle | 160~300(度) | 5 | 240 | 1 |
| P-75 | Needle position adjustment | Needle position adjustment | 0~240 | 1 | 33 | 1 |
| P-77 | Setting of beauty sewing | 0：unavailable 1： available | 0/1 | 1 | 0 | 1 |
| P-78 | Beauty sewing (close sewing) mode setting | 1：Close stitch on start sewing 2：Close stitch on end-sewing 3：Close stitch on both start nad end sewing | 1/2/3 | 1 | 2 | 2 |
| P-79 | return to factory-set parameter | Special functional parameters 5/8：Restore factory parameters | 0~15 | 1 | 0 | 1 |
| P-80 | highest speed of sewing | highest speed of sewing | 300~5000(rpm) | 100 | 4000 | 2 |
| P-81 | Pedal speed percentage | Pedal speed percentage | 50～100 | 1 | 100 | 2 |
| P-83 | Strength function | Try if the needle can't penetrate the cloth. 0: invalid; 1~15: intensity adjustment | 0~15 | 1 | 0 | 2 |
| P-84 | Function of cutting line and adding force | Effective when the cutting wire is an electromagnet; 0: invalid; 1~15: intensity adjustment | 0~15 | 1 | 0 | 2 |
| P-88 | Loose line suction Angle | Loose line suction Angle | 0~360 | 2 | 180 | 2 |
| P-89 | Loose line release Angle | Loose line release Angle | 0~360 | 2 | 350 | 2 |
| P-90 | Language selection setting | Setting of language：0：turn off 1：Chinese 2：English | 0~2 | 1 | 1 | 2 |
| P-91 | Change pitch selection | Change pitch selection 0:Changes Allowed 1:Allowed to change | 0~1 | 1 | 0 | 2 |
| P-92 | Pedal presser foot lift confirm time | Pedal presser foot lift confirm time | 10~300(ms) | 10 | 80 | 2 |
| P-93 | The neutral position of the pedal | Trimming the neutral position of the pedal | -15~15(0.1 度) | 1 | 0 | 2 |
| P-95 | Anti-nest function selection | Anti-nest function selection：0：hread clamp type 1：Anti-next type 2：thread wiper type | 0/1/2 | 1 | 0 | 2 |
| P-100 | Knee by function setting | Knee by function setting：0：unavailable 1：available | 0/1 | 1 | 1 | 2 |
| P-101 | The voltage at the zero position of the knee sensor | The voltage at zero position of knee by' s presser foot (Unit:0.01V) | 0~500 | 5 | 110 | 2 |
| P-102 | Knee sensor' s voltage of maximun travel distance | Knee sendor' s voltage of maximun stravel distance (unit:0.01V) | 0~500 | 5 | 185 | 2 |
| P-103 | Line tension / loose line function switch | 0 :Line tension control 1 :Ordinary loose line electromagnet control | 0/1 | 1 | 1 | 2 |
| P-104 | Pattern stop function enable | 0：unavailable 1：Stop the needle need to go through the current number of pattern stitches | 0/1 | 1 | 0 | 2 |

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| P-105 | Presser foot height sensor function setting | Presser foot height sensor function setting 0: unavailable 1: available | 0/1 | 1 | 1 | 2 |
| P-106 | The voltage adjustment at zero position of presser foot height sensor | The voltage adjustment at zero position of presser foot height sensor (unit:0.01v) (presser foot drop, feed dog is under the table) | 0~250 | 1 | 215 | 2 |
| P-107 | Overthickness detection sensitivity setting | Presser foot height sensor' s coltage setting of overthickness detection Unit:mv) (Relative to the zero position voltage) | 0~500 | 5 | 100 | 2 |
| P-108 | Full pressure duty cycle of thread trimming | Full pressure duty cycle of thread trimming(Buffering during the thread trimming and closing) | 50~100 | 1 | 90 | 2 |
| P-109 | Force adjustment of electromagnet for presser foot lifiting | Force adjustment of electromagnet for presser foot lifiting (Cushion when press foot is absorbed) | 50~100 | 1 | 65 | 2 |
| P-110 | Material thickness and tension control | Increase tension when sewing thick material | 0~10 | 1 | 0 | 2 |
| P-111 | Overthickness sewing speed | Limit speed of overthickness | 500~3000(rpm) | 50 | 1500 | 2 |
| P-112 | Overthickness stitch offset coefficient | Overthickness stitch offset deals | 50~150(%) | 1 | 120 | 2 |
| P-113 | Needle compensate stitch length mode | Needle compensate stitch length mode0: Invaild:vaild (press P114 to set stitch length) | 0/1 | 1 | 0 | 1 |
| P-114 | Needle compensate stitch length setting | Needle compensate stitch length setting<br>Parameter range of Stitch length 5mm type(1.0mm~5.0mm)<br>Parameter range of stitch length 5mm type(1.0mm~7.0mm) | 10~50 (70) mm | 1 | 35 | 1 |
| P-115 | Reverse sewing button function setting | 0: reverse sewing 1: tightly sewn<br>2: reverse sewing<br>3:reverse sewing+reverse sewing | 0~3 | 1 | 0 | 2 |
| P-116 | fill needle button function setting | 0: reverse sewing 1: tightly sewn<br>2: reverse sewing<br>3:reverse sewing+reverse sewing | 0~3 | 1 | 2 | 2 |
| P-117 | Dense needle pitch setting | Head button stitch stitch set | 50~150 | 1 | 110 | 2 |
| P-118 | Number of pretty sewing needle setting | Number of pretty sewing needle setting | 1~10 | 1 | 2 | 2 |
| P-119 | Pretty sewing needle distance setting | Pretty sewing needle distance setting | 50~150 | 1 | 107 | 2 |
| P-121 | Start trimming angle of Paragraph 1 | Start trimming angle of Paragraph 1 | 200~300 | 2 | 230 | 2 |
| P-122 | Paragraph 1 stroke of trimming | Paragraph 1 stroke of trimming | 0~100 | 1 | 40 | 2 |
| P-123 | Start trimming angle of Paragraph 2 | Start trimming angle of Paragraph 2 | 250~360 | 2 | 330 | 2 |
| P-124 | Paragraph 2 stroke of trimming | Paragraph 2 stroke of trimming | 0~100 | 1 | 65 | 2 |
| P-125 | Stop and trimming during fixed-length sewing | 0: invaild 1: vaild | 0/1 | 1 | 0 | 2 |

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|---|---|---|---|---|---|---|
| P-126 | loose thread enable when start sewing | 0: invaild 1: vaild | 0/1 | 1 | 1 | 2 |
| P-127 | Delay before start-sewing loose thread | Delay before start-sewing loose thread | 0~1000 | 10 | 100 | 2 |
| P-128 | Action time of loose thread when start-sewing | Action time of loose thread when start-sewin | 0~1000 | 10 | 200 | 2 |
| P-129 | Display backlight brightness Setting | Display backlight brightness Setting | 0~10 | 1 | 5 | 1 |
| P-131 | factory parameter save function setting | "0" invalidity; 1.save current parameter as factory parameter | 0~1 | 1 | 0 | 3 |
| P-135 | Midway reverse function selection | 0: unavailable 1: available | 0~1 | 1 | 0 | 1 |
| P-136 | The number of midway stitch set | Pin setting | 1~50 | 1 | 4 | 1 |
| P-137 | Seam midway down the number of times back and forth set | Set times | 1~10 | 1 | 1 | 1 |
| P-138 | Lock screen function setting | Lock screen function setting: 0: invalid 1: valid | 0~1 | 1 | 0 | 1 |
| P-139 | Lock screen time setting | Lock screen time setting: 0~240 (s) | 0~1 | 1 | 20 | 1 |
| P-140 | Delay time before thread hooking of Anti-nest | The delay time between the end of trimming and the hook | 0～500ms | 5 | 50 | 2 |
| P-141 | Thread hooking time of Anti-nest | The action time of the hooked electromagnet | 0～500ms | 5 | 50 | 2 |
| P-142 | Delay after Anti-nest hook | The delay time of the hook electromagnet turning off | 0～500ms | 5 | 50 | 2 |
| P-143 | Thread hooking duty ratio of Anti-nest | Adjust the action force of the hooked electromagnet | 0～100 | 1 | 100 | 2 |
| P-144 | Anti-nest suction work time | The work time of the suction valve | 0～2000ms | 10 | 250 | 2 |
| P-145 | Thread-straight work time of Anti-nest | The work time of a thread-straight solenoid | 0～500ms | 5 | 50 | 2 |
| P-150 | Maximum stitch length setting | Maximum needle distance setting<br>stitch length 5mm model parameter scale (1.0mm~5.0mm)<br>stitch length 7mm model parameter scale (1.0mm~7.0mm) | 10～50 (70) mm | 1 | 50 | 2 |
| P-151 | First off-line prevented stitch length | 0.invaild 1.vaild | 0~1 | 1 | 0 | 2 |
| P-152 | First off-line prevented stitch length setting | Stitch length setting Parameter range (1.0mm~5.0mm) | 10～50 | 1 | 40 | 2 |
| P-153 | Head button inching mode setting | 0: Invalid<br>1:valid(Press once valid, press again cancel, such as close sewing, over thickness, presser foot) | 0~1 | 1 | 0 | 2 |

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|---|---|---|---|---|---|---|
| P-155 | Needle bar lamp brightness setting | 0：Needle bar light off<br>1~5：Adjust the brightness of needle bar lamp of 5 gears（HMI control 0/1/2/3/4/5/0switch） | 0~5 | 1 | 5 | 2 |
| P-157 | Back sewing switch function setting | Back sewing mode setting<br>0: Back sewing only<br>1: back sewing plus attach stitch<br>2: Back sewing only, no action in standby mode | 0/1/2 | 1 | 0 | 1 |
| P-158 | Full pressure output time of back sewing (only presser foot, thread trimming) | Full pressure output time of presser foot | 0~800(ms) | 10 | 150 | 2 |
| P-159 | Output duty cycle of back sewing (only presser foot, thread trimming) | Output duty cycle of presser foot | 0~100 | 1 | 40 | 2 |
| P-160 | Backing sewing duration | Forced turnoff after back sewing duration | 0~60 (S) | 1 | 12 | 2 |
| P-161 | Front tacking sewing compensation1(only presser foot, thread trimming) | Stitch compensation parameters of front tacking sewing | 0~100 | 1 | 23 | 1 |
| P-162 | Front tacking sewing compensation2(only presser foot, thread trimming) | Stitch compensation parameters of front tacking sewing | 0~100 | 1 | 15 | 1 |
| P-163 | ending reinforcing-sewing compensation1 (only presser foot, thread trimming) | Stitch compensation parameters of ending reinforcing-sewing | 0~100 | 1 | 30 | 1 |
| P-164 | ending reinforcing-sewing compensation2 (only presser foot, thread trimming) | Stitch compensation parameters of ending reinforcing-sewing | 0~100 | 1 | 18 | 1 |
| P-165 | Continuous reinforcing-sewing compensation1 (only presser foot, thread trimming) | Stitch compensation parameters of Continuous reinforcing-sewing | 0~100 | 1 | 30 | 1 |
| P-166 | Continuous reinforcing-sewing compensation2 (only presser foot, thread trimming) | Stitch compensation parameters of Continuous reinforcing-sewing | 0~100 | 1 | 10 | 1 |
| P-170 | Compensate system enablement by speed | =0, P171~P176 Invalid parameter<br>=1, P171~P176 Invalid parameter | 0~1 | 1 | 1 | 2 |
| P-171 | Speed clockwise sewing compensation | Speed clockwise sewing compensate system | 50~150 | 1 | 100 | 2 |
| P-172 | Speed anti-clockwise sewing compensation | Speed anti-clockwise sewing compensate system | 50~150 | 1 | 100 | 2 |

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|---|---|---|---|---|---|---|
| P-173 | Starting reinforcing-sewing speed Clockwise sewing compensation | Speed Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-174 | Starting reinforcing-sewing speed Anti-clockwise sewing compensation | Speed Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-175 | ending reinforcing-sewing speed Clockwise sewing compensation | Speed Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-176 | ending reinforcing-sewing speed Anti-clockwise sewing compensation | Speed Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-180 | Compensate system enablement by stitch length | =0, P181~P200 Invalid parameter<br>=1, P181~P200 Invalid parameter | 0~1 | 1 | 1 | 2 |
| P-181 | 1mm Clockwise sewing compensation | 1mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-182 | 1mm Anti-clockwise sewing compensation | 1mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-183 | 2mm Clockwise sewing compensation | 2mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-184 | 2mm Anti-clockwise sewing compensation | 2mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-185 | 3mm Clockwise sewing compensation | 3mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-186 | 3mm Anti-clockwise sewing compensation | 3mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-187 | 4mm Clockwise sewing compensation | 4mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-188 | 4mm Anti-clockwise sewing compensation | 4mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-189 | 5mm Clockwise sewing compensation | 5mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-190 | 5mm Anti-clockwise sewing compensation | 5mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-191 | 6mm Clockwise sewing compensation | 6mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |

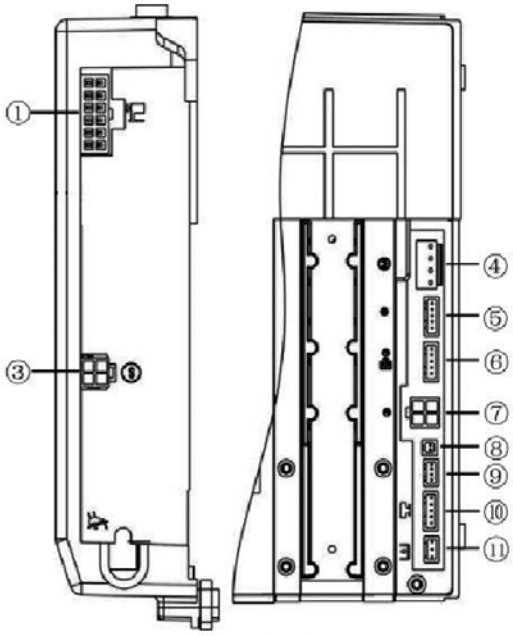
| | | | | | | |
|---|---|---|---|---|---|---|
| P-192 | 6mm Anti-clockwise sewing compensation | 6mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-193 | 7mm Clockwise sewing compensation | 7mm Clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |
| P-194 | 7mm Anti-clockwise sewing compensation | 7mm Anti-clockwise sewing compensation coefficient | 50~150 | 1 | 100 | 2 |

# 5. Error codes

| Error Code | Contents | Possible reasons | Checking and treatment |
|---|---|---|---|
| E011<br>E012 | Motor signal error | Motor position sensor signal failure | If electric engine plug is well contacted;<br>if electric engine signal detecting device has been broken;<br>if sewing machine handwheel correctly installed. |
| E021<br>E023 | Motor overload | motor stall<br>motor overload | If electric engine plug is well contacted;<br>if machine head or thread-cutting mechanism has been<br>blocked completely;f materials are too thick;<br>Electrical signal detection signal whether the normal. |
| E101 | Hardware drivers fault | Current detection abnormal<br>Driving hardware error | Current detection loop system is working<br>properly;Whether the damage to the device driver. |
| E111<br>E112 | Voltage too high | High input voltage<br>Brake circuit fault<br>Voltage detection error | System into line voltage is too high;<br>Braking resistance are working properly;<br>System voltage detection circuit are working properly. |
| E121<br>E122 | Voltage too low | Actual low voltage<br>Voltage detection is wrong | If the voltage on the inlet wire is too low Whether the<br>system voltage detection circuit the normal work. |
| E131 | Current circuit fault | Current detection abnormal | Current detection loop system is working properly. |
| E133 | Oz circuit fault | Oz circuit fault | Oz circuit system is working properly. |
| E134 | DBFLT malfunction | Automatic resistance circuit failure | Brake resistor plug is in good contact<br>Brake resistance is damaged |
| E201 | over current | Current detection error | Current detection loop system is working properly<br>Electrical signal is normal. |
| E211<br>E212 | Abnormal motor operation | Current or voltage detection error | If electric engine plug is well contacted<br>If electric engine signal |
| E301 | Communication error | Sci circuit error | if operation box plug is well contacted;<br>if operation box components are damaged. |
| E302 | Operation inner failure | Sci circuit error | check whether the operating box is damaged. |

| | | | |
|---|---|---|---|
| E303 | SPI Communication breakdown | Sci circuit error | check whether the main control board is damaged. |
| E304 | HMI From the main chip communication failure | Sci circuit error | 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. |
| E502 | Fuel fault alarm | Fuel fault alarm | Add oil Tips |
| E601 | Hardware drivers fault | Feed motor STEP2 hardware overcurrent | Current detection loop system is working properly;Whether the damage to the device driver. |
| E602 | Hardware drivers fault | Feed motor STEP2 software overcurrent | Current detection loop system is working properly;Whether the damage to the device driver |
| E603 | Hardware drivers fault | Feed motor STEP2 Current detection circuit | Current detection loop system is working properly;Whether the damage to the device driver. |
| E604 | Motor signal error | Feed motor STEP2 The initial mechanical angle | Feed motor connector is a good contact |
| E605 | Motor signal error | Feed motor STEP2 at the start, Encoder or rotor stuck | Feed motor connector is a good contact Machinery is stuck |
| E606 | Hardware drivers fault | Feed motor STEP2 Motor winding circuit | Current detection loop system is working properly;Whether the damage to the device driver. |
| E607 | Hardware drivers fault | Presser foot trimming motor STEP1 hardware overcurrent | Current detection loop system is working properly;Whether the damage to the device driver. |
| E608 | Hardware drivers fault | Presser foot trimming motor STEP1 software overcurrent | Current detection loop system is working properly;Whether the damage to the device driver. |
| E609 | Hardware drivers fault | Presser foot trimming motor STEP1 Current detection circuit | Current detection loop system is working properly;Whether the damage to the device driver. |
| E610 | otor signal error | Presser foot trimming motor STEP1 The initial mechanical angle | Presser foot trimming motor connector is a good contact |
| E611 | otor signal error | Presser foot trimming motor STEP1 at thestart,Encoder or rotor stuck | Presser foot trimming motor connector is a good contact Machinery is stuck |
| E612 | Hardware drivers fault | Presser foot trimming motor STEP1 Motor winding circuit | Current detection loop system is working properly;Whether the damage to the device driver. |
| E613 | Hardware drivers fault | The feed motor STEP2 is running ,Encoder or rotor stuck | Feed motor connector is a good contact Current detection loop system is working properly;Whether the damage to the device driver. |
| E614 | Hardware drivers fault | The Presser foot trimming motor STEP is running ,Encoder or rotor stuck | Feed motor connector is a good contact Current detection loop system is working properly;Whether the damage to the device driver. |
| P.oFF | Power off Display | Power off | Wait for power supply to resume. |
| EvAL | Trial expired | Trial expired | Contact the dealer processing |
| L.bob | The bottom line tips | The bottom line count value is negative | After replacing the bottom line, press P to cancel the Alert Status |
| P.bob | Remind of counting by piece | The number of counting is 0 | Press key to enter the interface, and long press "front seam" button for more than 2 seconds to cancel the prompt state |

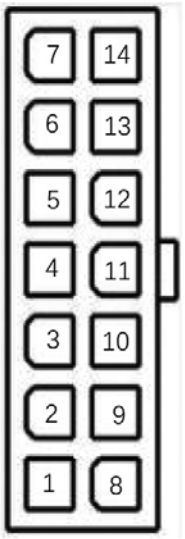
# 6. Definition




①14PIN function connector
③Burn connector
④ Spindle motor power cord connector
⑤ Spindle motor encoder connecto
⑥ Stepper motor encoder connector
⑦ Stepper motor power cord connector
⑧USB connector
⑨Oil level warning connector
⑩Control box wire connector
⑪Fan wire connector

**① 14PIN function connector definition**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Definition** | 1/2 stitch compensation | Presser foot lifter | 1/4 stitch compensation | 5V | Thread loose | Thread wiper | trimming |
| **Pin** | 14PIN | 13PIN | 12PIN | 11PIN | 10PIN | 9PIN | 8PIN |
| **Pin** | 7PIN | 6PIN | 5PIN | 4PIN | 3PIN | 2PIN | 1PIN |
| **Definition** | stitch compensation | Electromagnet voltage | Back stitch | ground | Electromagnet voltage | Electromagnet voltage | Electromagnet voltage |



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