MCj03463170000[1]Safety Instruction

1. Users are required to read the operation manual completely and carefully before installation or operation.
2. The product should be installed and pre-operated by well-trained persons. All power supplies must be turned off during the installation work, remember not to operate with power on.
3. All the instruction marked with sign MCj03463170000[1] must be observed or executed; otherwise, bodily injuries might occur.
4. For perfect operation and safety, it is prohibited that using extension cable with multi-outlet for power connection.
5. When connecting the power cord, it must be determined that the operating voltage conforms to the rated voltage value specified in the product identification.
6. Don’t operate in direct sun light，outdoors area and where the room temperature is over 45°C or below 0°C.
7. Please avoid operating near the heater at dew area or at the humidity below 10% or above 90%.
8. Don’t operate in area with heavy dust, corrosive substance or volatile gas.
9. Avoid power cord being applied by heavy objects or excessive force, or over bend.
10. The earth wire of power cord must be connected to the system ground of the production plant by proper size of conductions and terminals. This connection should be fixed permanently.
11. All the moving portions must be prevented to be exposed by the parts provided.
12. Turing on the machine in the first time, operate the sewing machine at low speed and check the correct rotation direction.
13. Turn off the power before the following operation:

1. Connecting or disconnecting any connectors on the control box or motor.

2. Threading needle.

3. Raising the machine head.

4. Repairing or doing any mechanical adjustment.

5. Machines idling.

1. Repairs and high level maintenance work should only be carried out by electronic technicians with appropriate training.
2. All the spare parts for repair must be provided or approved by the manufacturer.
3. Don’t use any objects or force to hit or ram the product.

**Guarantee time**

Warranty period of this product is 1 year dated from purchasing, or within 2 years from ex-factory date.

**Warranty detail**

Any trouble found within warranty period under normal operation, it will be repaired free of charge. However, maintenance cost will be charged in the following cases even if within warranty period:

1. Inappropriate use, including: wrong connecting high voltage, wrong application, disassemble, repair, modification by incompetent personnel, or operation without the precaution, or operation out of its specification range, or inserting other objects or liquids into the product.

2. Damage by fire, earthquake, lighting, wind, flood, salt corrosive, moisture, abnormal power voltage and any other damage cause by the natural disaster or by the inappropriate environments.

3. Dropping after purchasing or damage in transportation by customer himself or by customer’s shipping agency

\* We make our best effort to test and manufacture the product for assuring the quality. However, it is possible that this product can be damaged due to external magnetic interference and electronic static or noise or unstable power source more than expected; therefore the grounding system of operate area must guarantee the good earth and it’s also recommended to install a failsafe device (Such as residual current breaker).

**1. Operation panel key function description**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Icon | Name | Function description |
| 1 |  | Function key | 1. In the normal mode interface, press it to enter the "User parameter setting" interface.  2. In the parameter setting interface, press it to return to the main interface. |
| 2 |  | Setting parameter check and save | In the parameter setting interface, press it to save setting. |
| 3 |  | Parameter increase | Increase parameters / improve running speed. |
| 4 |  | Parameter decrease | Decrease parameters / reduce running speed. |
| 5 |  | Left key | Check the previous parameter. |
| 6 |  | Right key | 1. Check the next parameter.  2. Long press it to enter quick operation interface. |
| 7 |  | Mode selection | If you click, the following 4 modes will be switched in a loop:  1. Fully automatic: start-up is completed by full induction signal.  2. Free sewing  3. Semi-automatic: start the front induction signal + pedal to complete (synchronized with P-05 item).  4. Full manual: start-up is completed by pedal.  Long press it to enter mode setting interface. |
| 8 |  | Auto-suction | 1. Press it can switch suction off, front suction on, back suction on, front and back suction on and long suction successively.  2. Long press it to enter suction setting interface. |
| 9 |  | Thread trimming | 1. Press it can switch thread trimming off, front trimming on, back trimming on, and front and back trimming on successively.  2. Long press it to enter the setting interface to adjust feed angle of the second segment of thread trimming, and related parameters of thread trimming. |
| 10 |  | Presser foot lifting | 1. Press it can switch function off, front presser foot lifting, back presser foot lifting, and front and back presser foot lifting successively.  2. Long press it to enter the setting interface to adjust lifting angle of the second stage of the presser foot, and related parameters of the presser foot. |
| 11 |  | Sensor | 1. Press this key to check the real-time sensing value and current threshold of the sensor.  2. Long press it to enter sensor sensitivity setting interface. |
| 12 |  | Maintenance key | Press it can enter the maintenance mode, and it will turn off the presser foot, thread trimmer, motor and induction. |
| 13 |  | Needle stop position selection | Press it can switch up or down needle stop position. |
| 14 |  | Thickness selection | Press it can switch the fabric thickness: thick material, medium thick material, thin material. |
| 15 |  | Brightness adjustment | Press it can adjust the brightness. |
| 16 | Indicator light | ①F-SENSOR  ②M-SENSOR  ③B-SENSOR  ④STATE | 1. When the front sensor senses that there is cloth, the yellow light of F-SENSOR is on, and it goes out when there is no cloth.  2. When the middle sensor senses that there is cloth, the blue light of M-SENSOR is on, and it goes out when there is no cloth.  3. When the back sensor senses that there is cloth, the green light of B-SENSOR is on, and it goes out when there is no cloth.  4. When the sewing machine is abnormal, the red light of STATE is on, and it is off when it is normal. |

**2. Special function operation definition**

|  |  |  |
| --- | --- | --- |
| No. | Function name | Function description |
| 1 | Upper position quick adjustment | Step 1: Press the "" + "" to enter the "Advanced parameter setting" interface;  Step 2: Adjust the parameters to item P-72;  Step 3: Look at the direction of the handwheel, turn the handwheel clockwise to the upper position, and press the "" to save the current value. |
| 2 | Lower position quick adjustment | Step 1: Press the "" + "" to enter the "Advanced parameter setting" interface;  Step 2: Adjust the parameters to item P-73;  Step 3: Look at the direction of the handwheel, turn the handwheel clockwise to the lower position, and press the "" to save the current value. |
| 3 | Cloth identification mode | Step 1: Press the "" + "" to enter the cloth identification mode interface;  Step 2: After removing the cloth from the sensor, press " ";  Step 3: After selecting the fabric identification mode, press " "; the setting is complete. (There are prompts on the interface) |
| 4 | Main shaft zero angle setting | In the main interface, long press "" to enter quick operation interface to select main shaft zero angle setting. |
| 5 | Piece counting function | In the main interface, press the "" + "" key to enter the piece counting interface. |
| 6 | Stepping motor origin adjustment | In the main interface, press the "" + "" key to adjust stepping motor origin. |
| 7 | Technician parameter mode | In the main interface, press and hold "" + "" key at the same time, and enter the password to enter technician parameter mode. |
| 8 | Quick operation interface | In the main interface, long press "" to enter the quick operation interface: 1. Main shaft zero angle setting; 2. Up position quick adjustment; 3. Stepping motor switch; 4. Power on to find upper positioning; 5. Stepping motor origin adjustment; 6. Sewing table protection; 7. Presser foot protection. |
| 9 | Reset | In the main interface, long press"" + "" key to reset. |

**3.** **System parameter setting definition**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No | Function parameters | Range | Default | Description |
| P-01 | Sewing speed (r/min) | 200-7000 | 5500 |  |
| P-02 | Needle stop positioning selection | 0-1 | 0 | 0: Upper needle stop position  1: Lower needle stop position |
| P-03 | Trimming speed (r/min) | 200-7000 | 5200 | With trimming function: the speed setting for front sensor trigger start-up and back sensor signal finish (before trimming). |
| P-04 | Start-up mode | 0-1 | 0 | (Valid for full-automatic mode)  0: Automatic mode  1: Foot control mode (start-up by front sensor + front pedal) |
| P-05 | Automatic / semi-automatic  mode selection | 0-1 | 1 | (P-06 is turn on)  0: Automatic (match with P-04 use)  1: Semi-automatic (foot control mode) |
| P-06 | Auto sensing switch | 0-1 | 1 | 0: OFF (full manual mode is turn on)  1: ON (it can execute automatic / semi-automatic mode also match with P-05 use) |
| P-07 | Auto trimming switch | 0-3 | 3 | 0: OFF  1: Front trimming (Trimming when Mid-sensor receive signal)  2: Back trimming (Trimming after back-sensor receive signal)  3: Front and back trimming |
| P-08 | Auto suction | 0-3 | 3 | 0: OFF  1: Front trimming suction  2: Back trimming suction  3: Front and back trimming suction |
| P-09 | Automatic cloth feeding | 0-2 | 0 | 0: OFF  1: Cloth feeding when sewing  2: Cloth feeding after sewing |
| P-10 | Auto presser foot lifting | 0-3 | 0 | 0: OFF  1: Front presser foot lifting (When front sensor receive signal)  2: Back presser foot lifting (After back sensor receive signal)  3: Front and back presser foot lifting |
| P-11 | Presser foot lifting when stop on the sewing | 0-1 | 0 | 0: OFF  1: ON (when stop on the sewing the presser foot lifting automatically) |
| P-12 | Presser foot lifting after trimming | 0-1 | 0 | 0: OFF  1: ON |
| P-13 | Presser foot lifting when half back pedal | 0-2 | 0 | (Valid for full-manual / semi-automatic mode)  0: Half back & full back  1: OFF  2: Full back |
| P-14 | Manual suction | 0-2 | 1 | 0: No suction  1: Back suction  2: Front and back suction |
| P-15 | Machine lamp brightness | 0-4 | 3 | 0: OFF  1→4: The brightness grade, the more value the more brightness. |
| P-16 | Low air pressure mode | 0-1 | 0 | 0: Normal mode  1: Low pressure mode |
| P-17 | Semi-automatic continuous sewing | 0-1 | 0 | 0: OFF  1: Front step continuous sewing |
| P-18 | Constant speed of thread trimming switch | 0-1 | 0 | 0: OFF (After finish before trimming not execute P-03 speed)  1: ON (The speed of front and back trimming is fixed to the speed of P-03) |
| P-20 | Stop position selection after trimming | 0-1 | 1 | 0: Lower needle stop position  1: Upper needle stop position |
| P-22 | Front receiver E# switch | 0-1 | 1 | 0: ON (Turn on front sensor, sensor signal + pedal activated)  1: OFF (Turn off front sensor, pedal directly activated) |
| P-23 | Intermittent suction opening time (×100ms) | 1-600 | 20 | The more value the more time. |
| P-24 | Intermittent air suction off time (×100ms) | 0-600 | 0 | 0: For no intermittent air suction  Front suction off time (valid when P-46 function setting is 1) |
| P-25 | Synchronous suction (P16=1)（ms） | 0-2000 | 200 | Synchronous suction time of cloth (Valid for P-16 setting is 1) |
| P-26 | The stitches number between two sensors | 1-600 | 100 | Cycle period parameter: In a circle the back sensor receive signal then can continue running, otherwise a cycle stop. |
| P-27 | The delayed stitches number of front trimming (stitches) | 0-50 | 3 | The smaller value the more in advance, thread will retain longer (Mid-sensor trigger). |
| P-28 | The delayed stitches number of back trimming (stitches) | 0-50 | 3 | The small value the more in advance, the short of end-thread (Back-sensor trigger). |
| P-30 | The delayed time of front suction off (ms) | 0-2000 | 100 | The small value the close is fast. |
| P-31 | The delayed time of back suction off (ms) | 100-5000 | 200 | The small value the close is fast. |
| P-35 | The delayed stitches number before the machine stops (stitches) | 1-99 | 1 | After cloth has passed the sensor, the number of stitches when machine stop automatically. (Valid for back trimming off condition) |
| P-36 | The response time of front sensor (ms) | 0-990 | 50 | The small value the response is fast, the large value the response is slow. |
| P-37 | The sensitivity of front sensor | 10-900 | 300 | In order to adapt different cloth material setting front sensor receive strength. |
| P-38 | The sensitivity of middle sensor | 10-900 | 215 | In order to adapt different cloth material setting mid-sensor receive strength. |
| P-39 | The holding time of front presser foot lifting (ms) | 50-2000 | 200 | (In full automatic / semi-automatic mode)  The larger value the longer holding time. |
| P-40 | Back presser foot lifting start time (ms) | 0-2000 | 120 | The starting time of back presser foot lifting, the smaller value the faster the response. |
| P-41 | Full-on output time setting of presser foot (ms) | 10-990 | 100 | The larger value the higher of foot lifting (noted: not too high). |
| P-42 | Periodic signal of presser foot output (%) | 10-90 | 25 | When the presser foot is moving, the output is periodically power-saved to prevent the electromagnet from getting hot. |
| P-43 | The time for the presser foot laying down (ms) | 10-990 | 100 | The action time of presser foot laying down sequence. |
| P-44 | Presser foot protection (s) | 1-120 | 5 | Stop on the sewing the presser foot lifting, stop after trimming presser foot lifting, positive closing after heeling pedal for retention time. |
| P-45 | Trimming time (ms) | 10-990 | 30 | the longer time, the greater trimming force. |
| P-46 | Suction when continuous feeding | 0-2 | 0 | 0: No suction  1: Long suction  2: Synchronous suction |
| P-47 | Number of completed |  | 0 |  |
| P-48 | Needle goes up as power on | 0-1 | 0 | 0: OFF  1: ON |
| P-50 | Upper positioning adjustment | 0-2399 | 4 | Same as P-72. |
| P-51 | Lower positioning adjustment | 0-2399 | 16 | Same as P-73. |
| P-52 | Test speed (r/m) | 200-7000 | 5500 |  |
| P-53 | Test working time (×100ms) | 1-250 | 20 |  |
| P-54 | Test stop time (×100ms) | 1-250 | 20 |  |
| P-55 | Item A testing: Continuous running | 0-1 | 0 | 0: OFF  1: ON |
| P-56 | Item B testing: With function running | 0-1 | 0 | 0: OFF  1: ON |
| P-57 | Item C testing: Start stop operation | 0-1 | 0 | 0: OFF  1: ON |
| P-58 | Machine plate protection switch | 0-1 | 0 | 0: OFF  1: ON |
| P-59 | Presser foot protection switch | 0-1 | 0 | 0: OFF  1: ON |
| P-60 | Electric /Air-powered | 0-1 | 0 | 0: Electric  1: Air-powered |
| P-61 | Trimming switch by heeling pedal | 0-7 | 1 | 0: OFF  1: In manual mode  2: In semi-automation  3: In automation  4: In manual mode and semi-automation  5: In semi-automation and automation  6: In manual mode and automation  7: ON |
| P-63 | Language | 0-2 | 1 | 0: English  1: Chinese  2: Turkish |
| P-64 | The strength of front sensor | 0%-100% | 80% | Adjustment front sensor strength. |
| P-65 | The strength of middle sensor | 0%-100% | 80% | Adjustment middle sensor strength. |
| P-66 | The strength of back sensor | 0%-100% | 80% | Adjustment back sensor strength. |
| P-67 | The sensitivity of back sensor | 10-900 | 375 | In order to adapt different cloth material setting back-sensor receive strength. |
| P-69 | Response time of back sensor | 0-3000 | 0 | Response time of back-sensor, when sewing such as mesh cloth can adjust this item, then can achieve you want effects. |
| P-70 | Model selection | 0-2 | 0 | 0: Horizontal knife type  1: Side knife type  2: Back-tacking type |
| P-71 | Maximum speed limit (r/m) | 200-7000 | 6000 |  |
| P-72 | Manually up positioning adjustment | 0-2399 | 500 | Through hand-wheel direction, clockwise turn hand-wheel to up position press  to save the current value. |
| P-73 | Manually down positioning adjustment | 0-2399 | 500 | Through hand-wheel direction, clockwise turn hand-wheel to down position then press  to save current value. |
| P-74 | Parameter reference | N1-N5 |  | N1: Control box software version  N2: Panel software version  N3: Rotation  N4: Pedal AD  N5: Driver software version |
| P-76 | Password setting | 0000-9999 | 0000 |  |
| P-77 | Zero point angle setting |  | 0000 |  |
| P-78 | Suction bucket type | 0-2 | 0 | 0: With brush  1: Without brush  2: Valve |
| P-80 | The needle bar shield protection switch | 0-1 | 0 | 0: OFF  1: ON |
| P-81 | Electromagnet protection | 0-1 | 1 | 0: OFF  1: ON |
| P-82 | Alarm pieces | 0-9999 | 0 |  |
| P-83 | The number of standby display pieces | 0-1 | 0 | 0: OFF  1: ON |
| P-84 | Piece counting mode selection | 0-1 | 0 | 0: Ascending  1: Descending |
| P-85 | Piece counting trimming times | 0-50 | 1 |  |
| P-86 | Voice volume | 0-5 | 4 |  |
| P-87 | Voice broadcast selection | 0-1 | 1 | 0: OFF  1: ON |
| P-88 | User model |  | 3 |  |
| P-90 | Voice chip selection | 0-4 | 4 |  |
| P-91 | Back sensor switch | 0-1 | 1 | 0: OFF  1: ON |
| P-92 | Start machine voice selection | 0-11 | 0 |  |
| P-94 | Thin material light transmission | 1-800 | 20 |  |
| P-95 | Ordinary material light transmission | 1-800 | 200 |  |
| P-96 | Grid material light transmission | 1-800 | 50 |  |
| P-97 | Number of special material detection needles | 0-50 | 0 |  |
| P-98 | Trimming speed switch | 0-3 | 0 | 0: OFF  1: Front trimming  2: Back trimming  3: ON |
| P-99 | Front trimming pro**te**ction | 0-1 | 0 | 0: OFF  1: ON |
| P-100 | Sewing fabric type | 0-2 | 0 | 0: Thin material  1: Ordinary material  2: Grid material |
| P-101 | Front sensor identification signal difference | 0-50 | 10 |  |
| P-102 | Middle sensor identification signal difference | 0-50 | 10 |  |
| P-103 | Back sensor identification signal difference | 0-50 | 10 |  |
| P-104 | Pedal acceleration slope | 1-100 | 32 |  |
| P-106 | Back pedal trimming times | 0-1 | 0 |  |
| P-108 | Motor type | 0-2 | 0 | 0: 8-pole small resistance motor  1: 10-pole motor  2: 8-pole large resistance motor |
| P-128 | LED style | 0-5 | 1 |  |
| P-129 | Stepping motor switch | 0-1 | 1 | 0: OFF  1: ON |
| P-130 | Stepping motor original point | -2400～2400 | 0000 | Need to lock the P131 stepping motor off. |
| P-131 | Stepping motor lock | 0-1 | 0 | 0: Locked  1: Release |
| P-132 | Maximum current of stepping motor | 20-60 | 50 | (\*100mA) The maximum current when the stepping motor is running. |
| P-133 | Steady current of stepping motor | 5-20 | 20 | (\*100mA) The steady current of stepping motor when the presser foot is raised (that is the steady force of the presser foot). |
| P-134 | Trimming first feed speed | 5-1500 | 101 | Quickly pass the first half of the empty stroke section of the thread trimming mechanism. |
| P-135 | Trimming first feed angle | -2400～2400 | 15 | It is not allowed to be greater than P-137 second feed angle. |
| P-136 | Trimming second feed speed | 5-1500 | 650 | Reduce the speed appropriately and increase the force when thread trimming. |
| P-137 | Trimming second feed angle | -2400～2400 | 300 | It is not allowed to be smaller than P-135 first feed angle [decreasing parameters can reduce the metal collision sound of the trimming tool, but at the same time it will also reduce the trimming force]. |
| P138 | Maximum current for thread trimming | 30-55 | 50 |  |
| P-141 | Trimming first retract speed | -2400～2400 | 200 | The scissors quickly return to the position through the empty stroke section of the thread trimming mechanism, reducing the impact on the fabric being sewn. |
| P-142 | Trimming first retract angle | -2400～2400 | 20 | It is not allowed to be smaller than P-144 second retract angle, and it is not allowed to be larger than P137 second feed angle. |
| P-143 | Trimming second retract speed | 5-1500 | 200 |  |
| P-144 | Trimming second retract angle | -2400～2400 | 0 | It is not allowed to be greater than P-142 first retract angle (generally set as the origin of the stepping motor) [control the scissors return position]. |
| P-145 | Presser foot first lifting speed | 5-1500 | 50 | The gap between the stepping motor mechanism and the presser foot mechanism is stuck at low speed to prevent collision and sound. |
| P-146 | Presser foot first lifting angle | -2400～2400 | -30 | It is not allowed to be smaller than P-148 presser foot second lifting angle. |
| P-147 | Presser foot second lifting speed | 5-1500 | 550 |  |
| P-148 | Presser foot second lifting angle | -2400～2400 | -330 | It is not allowed to be smaller than P-146 presser foot first lifting angle [control the highest position of the presser foot]. |
| P-149 | Presser foot first lowering speed | 5-1500 | 150 |  |
| P-150 | Presser foot first lowering angle | -2400～2400 | -100 | It is not allowed to be larger than P-152 presser foot second lowering angle, and not allowed to be smaller than P148 presser foot second lifting angle. |
| P-151 | Presser foot second lowering speed | 5-1500 | 100 | Return to the origin at low speed to prevent the separation of the stepping motor mechanism and the presser foot mechanism from causing excessive noise. |
| P-152 | Presser foot second lowering angle | -2400～2400 | 0 | It is not allowed to be smaller than P-150 presser foot first lowering angle (generally set to the origin of the stepping motor) [control presser foot return position]. |
| P-153 | Timing fine-tuning of front trimming | 0-100 | 10 | This parameter is used for the consistency of the thread end length of the sewing fabric under the conditions of high speed and low speed of the main shaft motor (cannot be easily modified). |
| P-154 | Stepping motor origin locking current | 1-12 | 4 |  |
| P-155 | Stepping motor debugging hold time | 0-300 | 10 |  |
| P-164 | Presser foot micro-lifting switch | 0-1 | 0 | 0: OFF  1: ON |
| P-165 | The detection stitches number of presser foot micro-lifting | 0-50 | 2 |  |
| P-166 | Presser foot micro-lifting angle | -2400～2400 | -80 |  |
| P-167 | Presser foot micro-lifting speed | 5-1500 | 100 |  |
| P-168 | Presser foot micro-lifting lowering speed | 5-1500 | 100 |  |
| P-169 | Thickness | 0-2 | 0 | 0: Thick material  1: Medium thick material  2: Thin material |
| P-170 | Fabric thickness adjustment speed | 50-1000 | 200 |  |
| P-171 | Thick material angle | -2400～2400 | 1095 |  |
| P-172 | Medium thick material angle | -2400～2400 | 1203 |  |
| P-173 | Thin material angle | -2400～2400 | 1303 |  |

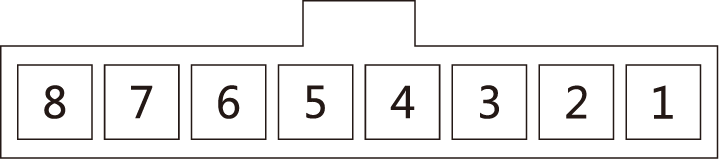
Note: the initial value of parameters is for reference only, and the actual value of parameters is subject to the real object.

**4. Error code list**

|  |  |  |
| --- | --- | --- |
| Error Code | Problem | Solution |
| NC | Abnormal communication | Turn off the system power and check whether the panel connector is loose or disconnected, and restart the system after returning it to normal. If it still does not work normally, please replace the control box and notify the after-sales service. |
| E01 | High voltage | 1. Whether the grid voltage is higher than AC260V.  2. If it is self-generated power supply, please reduce the generator power.  3. If it still does not work normally, please replace the control box and notify the after-sales service. |
| E02 | Low voltage | 1. Whether to connect to low voltage.  2. Reset.  3. If it still does not work normally, please replace the control box and notify the after-sales service. |
| E05 | Speed controller contact abnormal | 1. Check whether the pedal connector is loose or fall off, and restart the system after returning it to normal.  2. If it still does not work normally, please replace the control box or speed controller and notify the after-sales service. |
| E07 | Motor stalling | 1. Turn off the power and check whether the handwheel can be turned smoothly (turn the handwheel by hand), if it cannot be turned, please check the machine.  2. Turn off the power, check whether the motor power connector is loose, plug it in and restart it.  3. Check whether the upper needle stop position is correct, if not, please adjust the upper positioning position.  4. If it still does not work normally, please replace the control box or spindle motor and notify the after-sales service. |
| E11 | Abnormal positioning signal | 1. Turn off the system power, check whether main shaft motor encoder connector is loose or fall off, restore it to normal and restart the system.  2. Check whether the motor zero point correction setting is correct; Reset the motor zero point correction; Whether there is oil on the encoder code plate, please clean it if there is any.  3. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service. |
| E14 | The encoder signal is abnormal | 1. Turn off the system power, check whether the main shaft motor encoder connector is loose or fall off, restore it to normal and restart the system.  2. Check whether the grating is installed correctly (whether the grating screws are tightened and whether the grating is in the center of the encoder).  3. Check whether there is oil on the encoder code plate, if there is, please clean it up, and restart the system after recovery.  4. If it still does not work normally, please replace the control box or main shaft motor and notify the after-sales service. |
| E15 | Power module abnormal overcurrent protection | 1. Please check whether the motor power cord has bad contact.  2. Please check whether the motor power cord is crushed.  3. Please replace the control box or main shaft motor and notify the after-sales service. |
| E16 | Incorrect position of presser foot | Check whether the presser foot is open, whether the presser foot safety switch is damaged, and whether the socket is abnormal. |
| E17 | Incorrect position of sewing table | Check whether the sewing table is open, whether the safety switch of the sewing table is damaged, and whether the socket is abnormal. |
| E92 | Thread trimming (presser foot) stepping motor overcurrent | Turn off the system power and observe whether the thread trimming (presser foot) stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine head first. If it is normal, check if the thread trimmer (presser foot) stepping motor interface is loose or fall off, restore it to normal and restart the system. |
| E94 | Thread trimming (presser foot) stepping motor can’t find zero-point | Turn off the system power and observe whether the thread trimming (presser foot) stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine head first. If it is normal, check whether the thread trimming (presser foot) stepping motor encoder interface is loose or falling off, and whether there is oil on the encoder code disk. If there is any oil, please clean it up, restore it to normal and restart the system. |
| E95 | Thread trimming (presser foot) stepping motor encoder signal is abnormal | Turn off the system power, check if the thread trimming (presser foot) stepping motor encoder interface is loose or fall off, restore it to normal and restart the system. |
| E96 | Thread trimming (presser foot) stepping motor is not connected | Turn off the power of the system, check whether the wire trimming (presser foot) stepping motor power cord interface and encoder interface are loose or fall off, and restart the system after returning it to normal. |
| E97 | Thread trimming (presser foot) stepping motor stalling | Turn off the system power and observe whether the thread trimming (presser foot) stepping motor is stuck. If it is stuck, remove the mechanical failure of the machine head first. If it is normal, check whether the wire trimming (presser foot) stepping motor power cord interface and encoder interface are loose or fall off, restore them to normal and restart the system. |

**5. Port diagram**

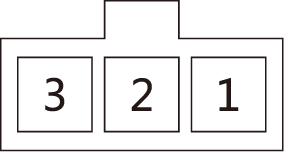
**8A white port (LED, launcher)**



1: GND, 2: LED+, 3: Reserved, 4: Manual trimming, 5: Middle launcher,

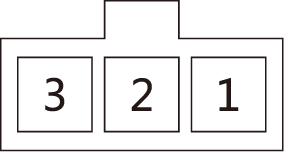
6: Back launcher, 7: Front Launcher, 8: +5V

**3P black port (presser foot safety switch)**



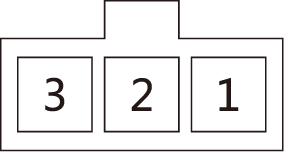
1: GND, 2: signal, 3: +5V

**3P red port (sewing table safety switch)**



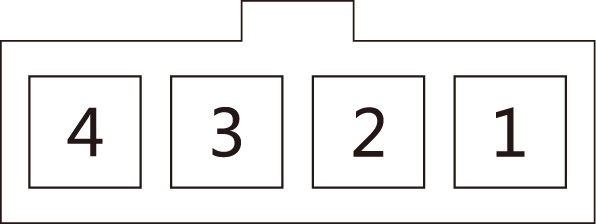
1: GND, 2: signal, 3: +5V

**3P white port (sewing table safety switch) reserved**



1: GND, 2: signal, 3: +5V

**4P white port (front and medium receiving)**



1: front receiving signal, 2: +5V

3: medium receiving signal, 4: +5V

**2P white port (back receiving)**



1: Receiving signal, 2: +5V

**6P white port (suction)**



1. Thread chain suction: 1, 4 (+24V)

2. Cloth suction: 2, 5 (+24V)

3. Thread tension release: 3, 6 (+24V)