1. Notice

It is used in industry sewing machine. For perfect operation and safety, installation and operation must be supervised by professional.

1.1 Work Environment

▲Please use 220VAC in ±10% ranges.

▲To avoid the false operation please keep the product away from the high electromagnetic interference.

▲Please operate in the area which temperature is 5℃~45℃ and humidity is 80% or less.

▲Please keep the product away from the flammability and exploder.

1.2 Notice of Installation

▲Turn off the power and unplug the cord before installation.

▲The wire must not set to be near the wheel and other movable parts.

▲To avoid the static interference and current leakage, all grounding must be done.

1.3 Notice of Safety

▲ Turn off the power before maintenance and repairs or raising the machine arm, or changing needle, or threading needle.

▲Please don't open the box except the professional.

▲When turn on the machine in the first time, use low speed to operate and check the correct rotation direction.

▲During machine operation, don't touch any moving parts.

▲All moving parts must use the protective device to avoid the body contact and objects insertion.

▲When there is water or other liquid, or caustic material on box or motor, you must stop operation and turn off the power.

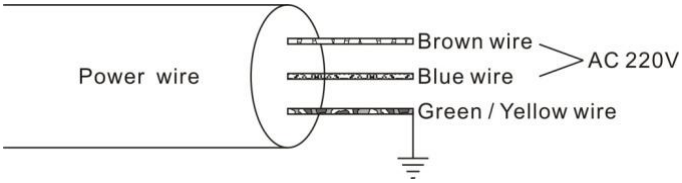
▲All connector shouldn't be plug and unplug when power on.

▲The connector should be plug and unplug in the correct method.

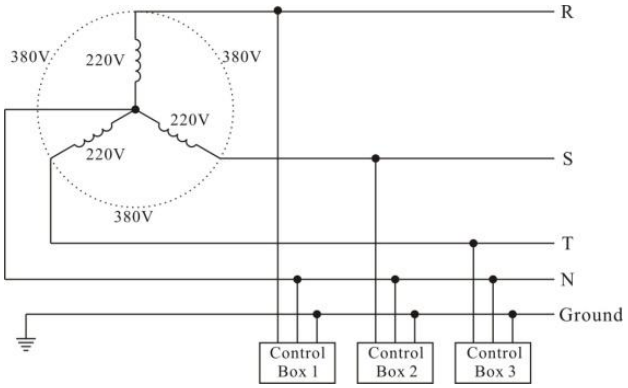
2. Power Connection

2.1 Single Phase 220V Power Connection

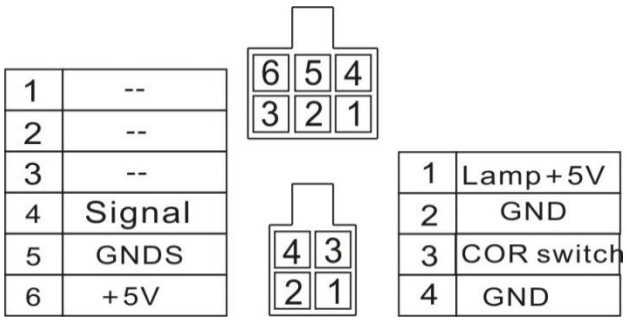
Ground wire (green & yellow) must be grounding



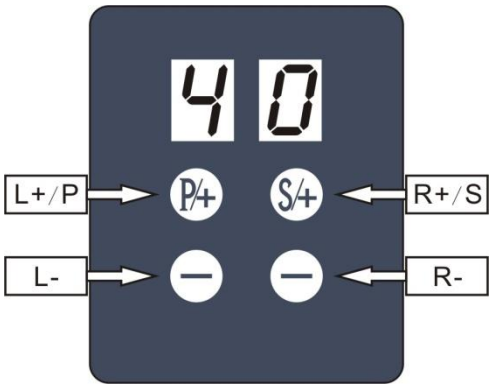
2.2 Three Phase 380V Power Connection



3. Connector Diagram



4. Function of Panel



4.1 Display: sewing speed, e.g. 40 is 4000 rpm.

4.2 Key: Short press the key, modify the value. **Long press (more than 1 second)** the key, perform special functions (See farther below).

5. Operation

5.1 Setup Parameter

5.1.1 Modify Value

Default Interface: Long press "P" will be into select parameter interface.

Select Parameter Interface: Short press L+/- & R+/- to select index. **Long press** "S" will be into modifying value interface. **Long press "P"** will be return default interface.

Modifying Value Interface: Short press L+/- & R+/- to modify value. **Long press** "S" to confirm and save, or **long press** "P" to repeal change, and return select parameter interface.

5.1.2 Reset to Factory Defaults

One way: Set **B3** to "1", then restart and display "IN". Display "OK" after finished.

Another way: Long press "L-" for 1 second or more when power on, display "IN". Display "OK" after finished.

5.2 Set Needle Up/Down

Set **A3** select Needle Up/Down, when A3 = 1, the needle bar stops in the up position, otherwise the needle bar stops in the down position.

5.3 The Function of COR switch and pedal back position

COR switch and pedal back position are multi-function. A05 set COR switch, A06 set pedal back position.

0 - Positioning the needle up/down

1 - Correct stitches

5.4 Safety Switch

Set **A8** to "1", if turn up the Machine head, can't sew and display "CR".

5.5 Automatically Move to Up Position

Set **A7** to "1", the machine will move to up position and stop automatically as power on.

6. General Parameter Table (part)

SN	Range	Description
A1	5~50	**Maximum** speed(500~5000rpm)
A2	15~50	**Minimum** speed(150~500rpm)
A3	0~1	**Needle Up/Down**, see 5.2
A4	0~1	Needle Up/Down of Correct Stitches**:** 0 - random, 1 – A3
A5	0~1	**COR switch mode,** see 5.3
A6	0~1	**Pedal back position mode,** see 5.3
A7	0~1	See 5.5
A8	0~1	See 5.4
A9	20~99	**Acceleration**
B1	0~14	**Needle Up** position
B2	0~14	**Needle Down** position
B3	0~1	Reset parameter to Factory Defaults, see 5.1.2
B4	1~60s	The **running** time of aging test
B5	1~60s	The **idle** time of aging test
B6	0~72h	The **total** time of aging test
B7	0~1	**Active** the aging test
B8	0~1	Enable detect E3
B9	0~1	Enable detect E1
C1	0~5	Pedal mode: 0–linear;1–polyline;2–curve(slow → quick);3–curve(quick → slow); 4-S curve(slow → quick → slow); 5-S curve(quick → slow → quick)
C2	5~50	The speed of knee of polyline
C3	0~40	The value of knee of polyline: C4 ≥ value ≥ C5
C4	0~40	Pedal input **MAX value**: value ≥ C5
C5	0~40	Pedal input dividing value of **high speed and low speed:** C4 ≥ value ≥ C6
C6	0~40	Pedal input dividing value of **low speed and Balance:** C5 ≥ value ≥ C7
C7	0~40	Pedal input dividing value of **Balance and Foot lifter:** C6≥ value ≥ C8
C8	0~40	Pedal input dividing value of **Foot lifter and Trimming:** C7 ≥ value ≥ C9
C9	0~40	Pedal input **MIN value**: value ≤ C8
D1	0~25	Pedal loop value
D2	1~20	The pedal will be greater **sensitive** when the value is smaller.
D3	0~1	**Polarity** of safety switch
D4	0~99	Timing of judge the **Safety Switch**.

7. Signal Checking

Long press "S" for 1 second or more when power on, display "TS". Press "L+" to increase SN, press "L-" to decrease SN.

7.1 Pedal: Display the different pedal position as below

Display	Meanings	Descriptions
99	High speed	The second segment forward
L5	Low speed	The first segment forward
bL	Balance	Default
FP	Foot lifter	The first segment backward
rn	Trimming	The second segment of backward
Er	Fault	Pedal fault or disconnected

7.2 Synchronizer: Turn the hand wheel by hand equably, display "1" or "0".

7.3 Switch: L – COR switch; R - Safety Switch

7.4 Encoder signal of motor: Turn the hand wheel by hand equably, display the encode count of motor.

7.5 Version of software: 02, e.g. the version is v02**.**

7.6 Year/month of software: EC

L displays year, D-2013, E-2014, and so on. R displays month, A-October, B-November, C-December. CD display day.

E.g.: "EC" – 2014.12

7.7 Date of software: 25

7.8 AC power: e.g. 22 is 220VAC

7.9 BUS power: e.g. 31 is 310VDC

7.10 Motor current, Range is 88±5

7.11 The value of pedal

8. Measurement of Error and Warning

code	Causation	Measurement
E1	Voltage is too high	Check the AC power.
E3	Voltage is too high	Check the AC power.
E5	Synchronizer error	Check synchronizer, see 7.2.
E6	Current is overload	Check the load.
E9	Motor error	Check motor wire
Pd	Pedal warning	Release the pedal.
cr	Safety SW warning	Check Safety SW., see 5.4
AJ	Switch warning	Check COR switch

Appendix: 7-segment Display Characters Compare Table

0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**
A	b	c	d	E	F	G	H	I	J
K	**L**	**M**	**N**	**O**	**P**	**Q**	**R**	**S**	**T**
t	L	n	n	o	P	q	r	5	T
U	**V**	**W**	**X**	**Y**	**Z**				
U	u	W	X	Y	Z				