BioLAB

OPERATING MANUAL

ORBITAL SHAKER

BSOT-401

CE ISO9001 CERTIFIED

www.biolabscientific.com

INDEX

1. Introduction

SHA52-250 Orbital Shaker is a powerful variable speed shaker which provides efficient orbital motion. Speed and time are under microprocessor control. The shaker can be applicable in different laboratories: in microbiology, chemistry, immunology, biochemistry, and molecular biology.
Features:
- LCD display. It is easy to setup and use.
- Set-up the digital timer within 0~100hrs. Beep-signal and stop of the timing completion.
- Gentle, reliable shaking with long-life direct brushless motor.

2. Specifications

1. The normal operating condition:

Ambient temperature:4C~ 45C The relative humidity: ≤70%
Power supply:AC100-240V1.5A

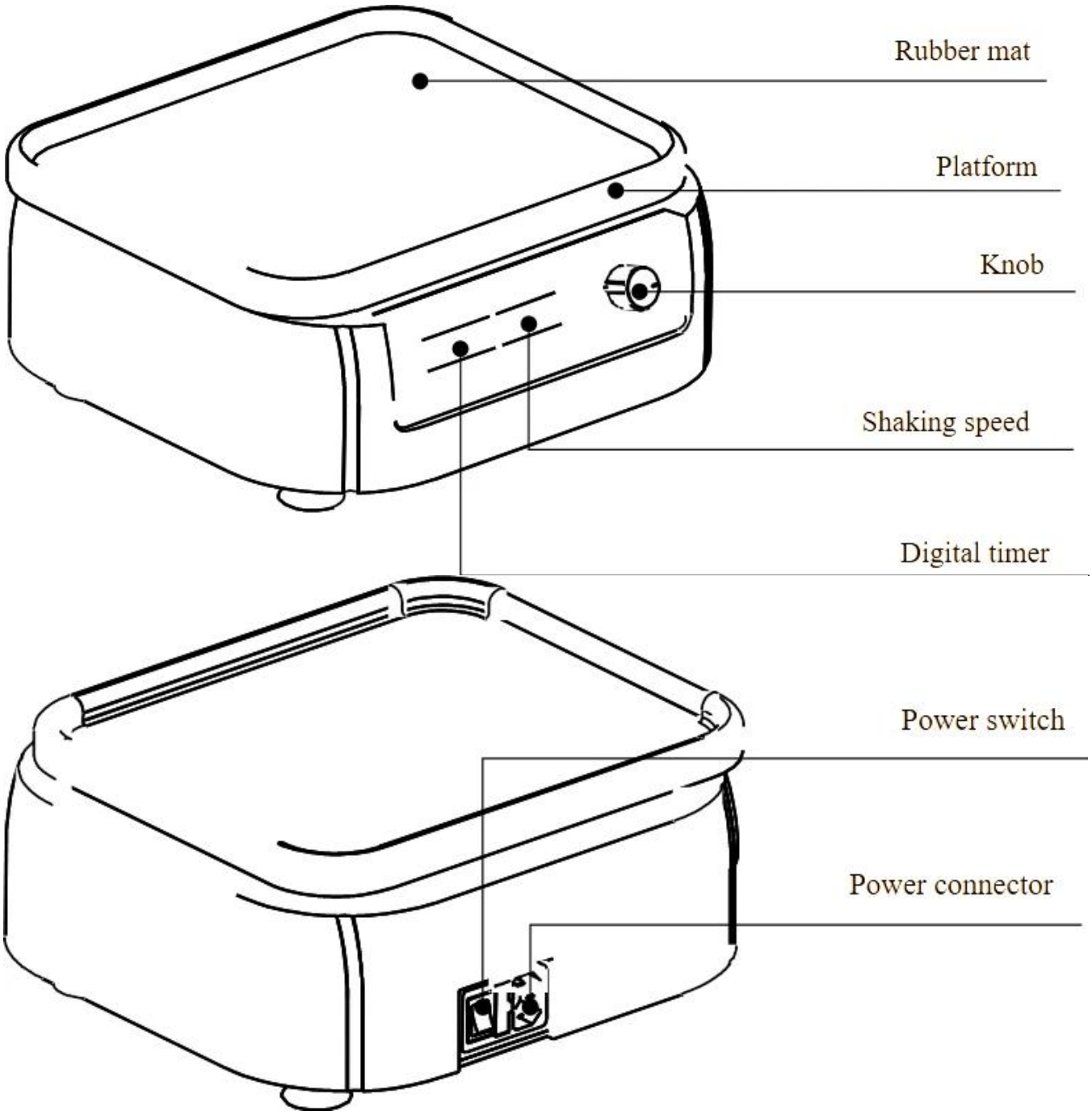
2. The basic parameters and the function.

Type Parameter	SHA52-250
Shaking Speed	50~300rpm
Orbit	10mm
Digital timer	1min~99h59min
Max. load capacity	3.0kg
Power supply	100W
Dimension(mm)(LxWxH)	303x271x110
Weight(kg)	7.5

3. Preparations

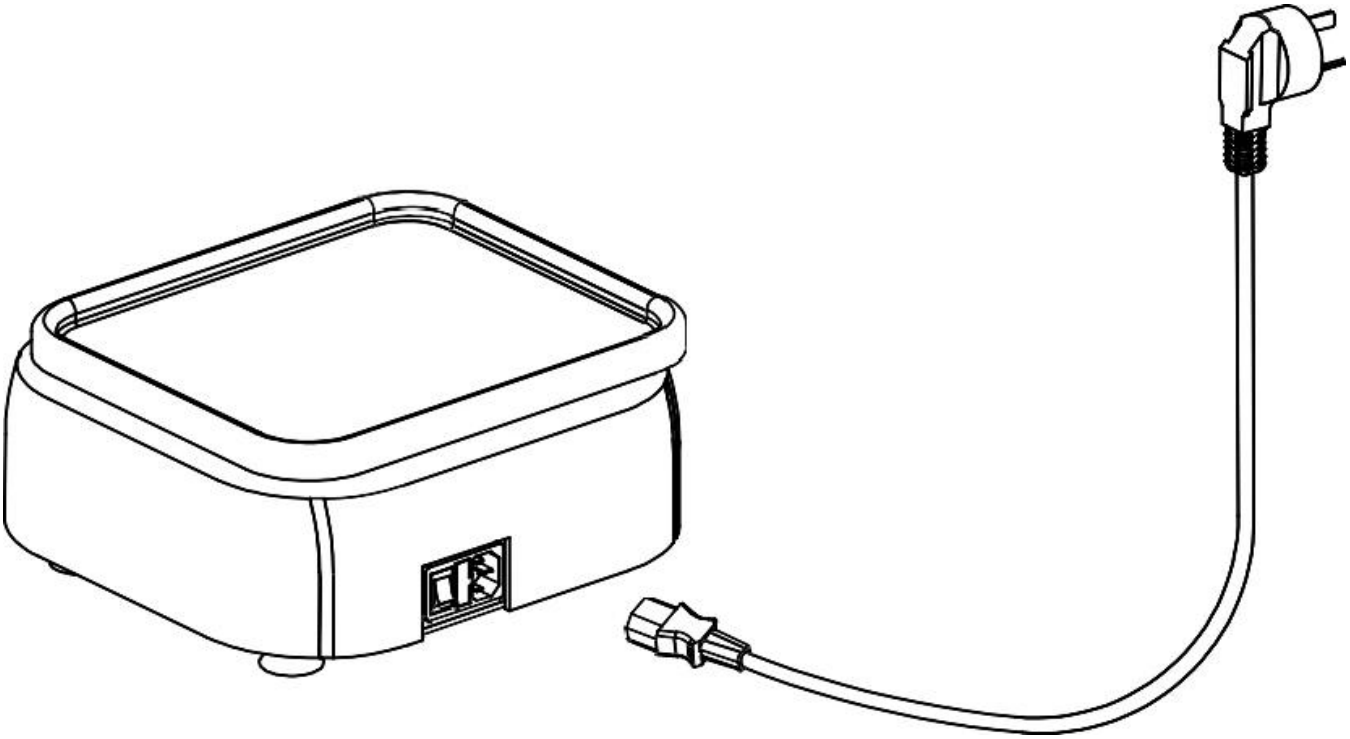
This chapter introduces Orbital Shaker's mechanical structure and the central panel's functions and some preparations before power-on. You should be familiar with this chapter before the Orbital shaker is first operated.

1. Structure Description



2. Power connection

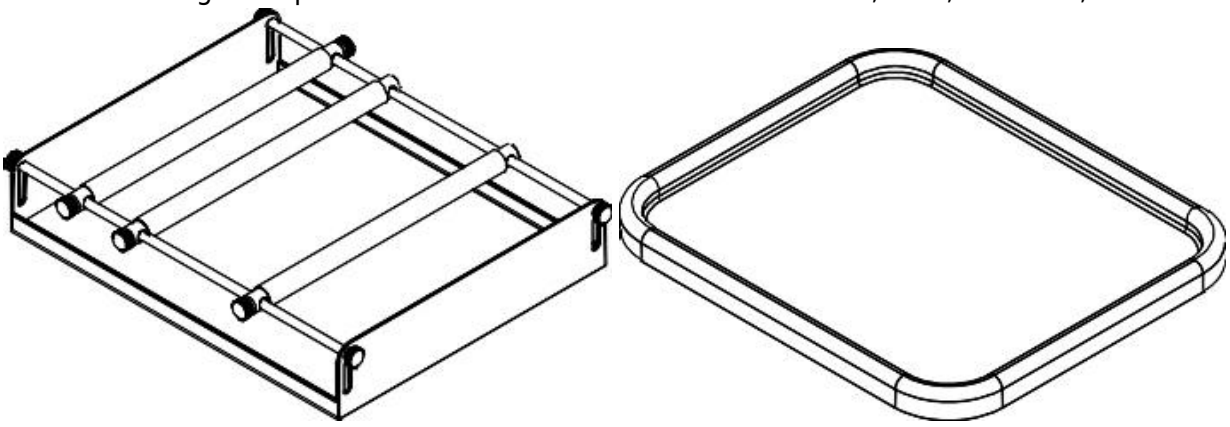
Place the Orbital Shaker on the horizontal even working surface. Plug the extend power supply unit into the socket at the rear side of the shaker. Insert the column connector of the power line to power connector of the device ,and insert another connector of the power line to mains power supply.



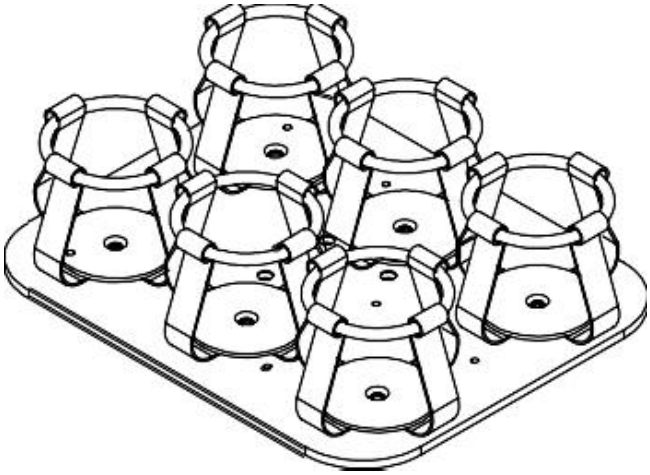
AC100-240V

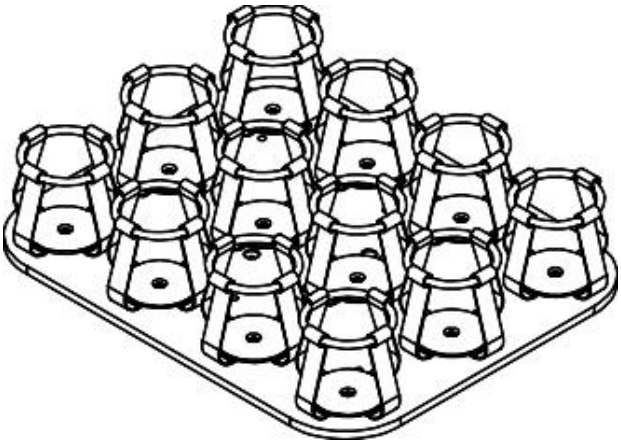
3. Platform installation

Four interchangeable platforms for shakers SHA52-250b are UP-1, PP-1,PP06-250,PP12-100.



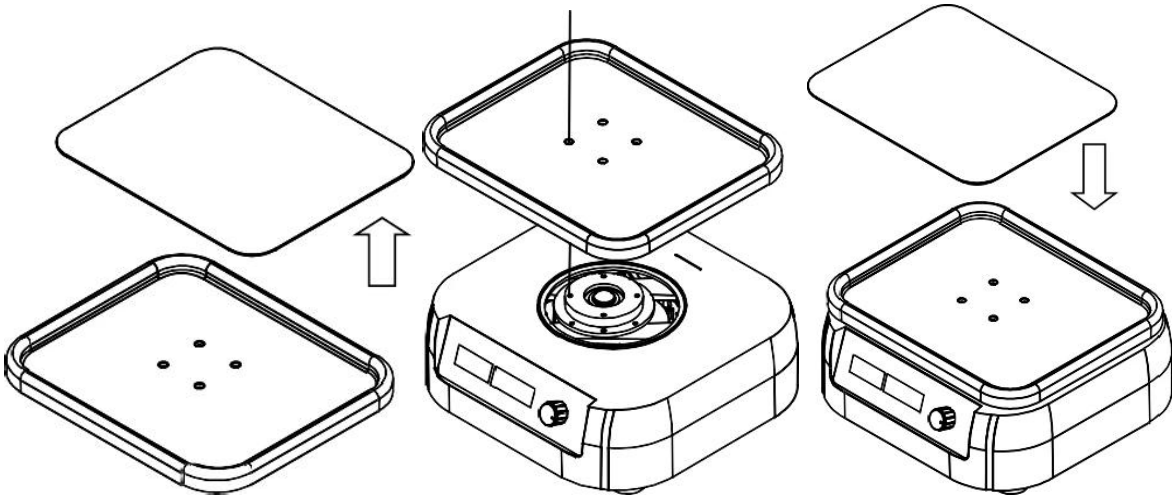
1. UP-1 2. PP-1





3. PP06-250 4. PP12-100

1) Installation for platforms UP-1 and PP-1

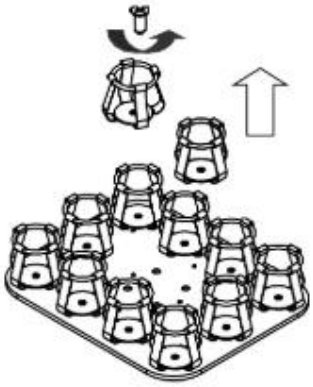


Take out non-slip rubber mat.

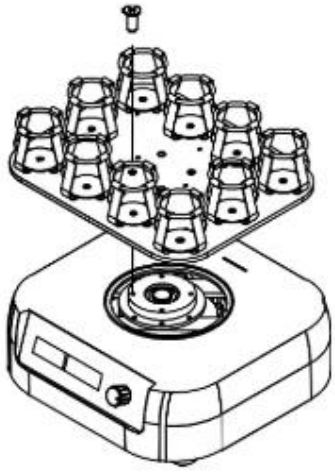
By inserting 4pcs of M4X8 screws, fix the platform onto the main part.

Then, take back the non-slip mat in the platform.

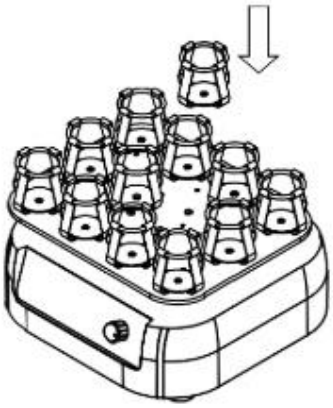
2) Installation for platforms PP06-250 and PP12-100



Take out the two middle clamps.



By inserting 4pcs of M4X8 screws, fix the platform onto the main part.



Then, take back the two middle clamps in the platform.

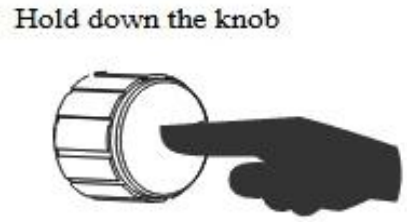
4. Operation Guide

1. Shaking speed and timing setting
a) When the instrument powers on, display screen will show "8" one by one. The instrument goes into the initial state with the sound of "du..."
b) After about 2s later, time display window shows 9: 30 as the set timing time. It means that the timing time is 9 hours and 30 minutes. The speed display window shows 200. It means the set shaking speed is 200rpm.
c) Press the knob and keep off at once the first time, the tens digit of speed will flicker. Increase the speed by turning the knob clockwise, and decrease the speed anticlockwise.

d) Press the knob and keep off at once the second time, the units of time will flicker. Increase the timing by turning

the knob clockwise,and decrease the timing anticlockwise.
e) Press the knob and keep off at once the third time, the hundreds of time will flicker. Increase the timing by turning the knob clockwise, and decrease the timing anticlockwise This function can accelerate the timing setting.
f) After setting finished 4s later, the flickering will disapear, and the setting value will be defaulted. In the same time, hold down the knob (about 1s) immediately to start mixing and timing.

Notice:
1) When setting speed, in the process of turning the knob anticlockwise it turns "OFF" in display, it means closing the shaking speed.
2) When setting timing, in the process of turning the knob anticlockwise it turns "00:00" in display, it means the timing is
"∞".



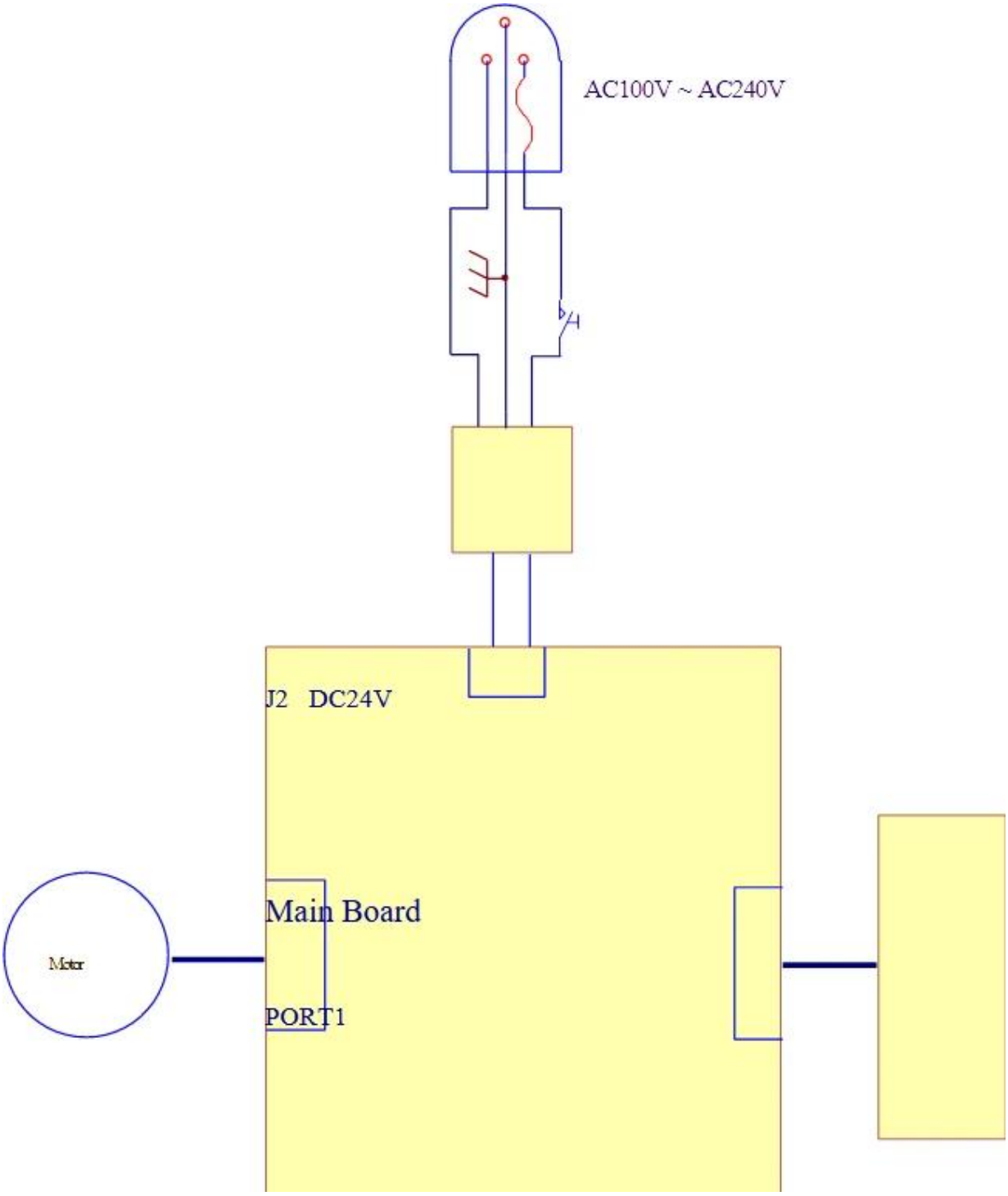
2. Operation and stop
a) Hold down the knob (about 1s), the instrument will run in current speed, in the meantime, the timing begin counting down.
b) In the process of running, hold down the knob (about 1s), the mixing and timing will stop, and then the display will show set value.
3. Changing the speed and timing during running.
a) In the process of running, press the knob instantly first time, the tens digit of speed will ficker. Then, turn around the knob to change speed.
b) Press the knob instantly second time, the units of time will flicker. Then, turn around the knob to change timing.
c) After about 4s, flickering disappears, the display will show set value. Then, the instrument will run according to new set speed and timing.
Press and keep off at once.

5. Failure analysis and troubleshooting

Failure analysis and processing procedures

No.	Phenomenon	Possible Causes	Processing Procedure
1	Display window doesn't response after power-on	No power	Checktheconnectionof power
		switch Failure	Exchange the switch
		Others	Contact the seller
2	Shaking too big	Mixingsamplesare placed dissymmetrical	Placethemixingsamples symmetrical
3	Theactualspeedis differentfromthe displayed speed	Brokensensoror loose contact of the module	Contact the seller
4	"ERR" in the display	Shaking speed is out of control	Contact the seller
5	Press invalid	Knob failure	Contact the seller

Annex 1:Wiring Diagram for SHA52-250



Biolab Scientific Ltd.
Trillium Executive Center, East Tower, 675 Cochrane Dr, Markham, Ontario L3R 0B8, Canada
Email: info@biolabscientific.com | Website: www.biolabscientific.com