SYSPRO *AGRO*

Germinadoras Profesionales

1.General

Intelligence Artificial Climate Incubator is a biological incubation experimentation instrument which takes advantage of illumination plus automatically day and night shifting program to keep a constant temperature. The instrument could be used in various areas such as seed germinate, seeding breeding, plant group foster and planting, animalcule incubation, breeding of insects and small animals, anti-oxidation experiment of medicines and environmental experiments of articles.

2. Specification of types

Model	Volume	Outside Size (wide×deep×high)	Temp range	Illumination degree	Humidity range (%RH)
RTOP-150B	150L	520×550×1600mm	0~50℃	0~3000LX	50~90%RH
RTOP-260D	270 L	570×570×1700 mm	0~50℃	0~5500LX	50~90%RH
RTOP-268D	268 L	570×570×1730mm	0~50℃	0~5500LX	50~90%RH
RTOP-280D	280 L	625×630×1500 mm	0~50℃	0~5500LX	50~90%RH
RTOP-300D	300 L	570×570×1900 mm	0~50℃	0~5500LX	50~90%RH
RTOP-310D	310 L	570×570×1900 mm	0~50℃	0~5500LX	50~90%RH
RTOP-430D	430 L	650×650×1880 mm	0~50℃	0~5500LX	50~90%RH
RTOP-500D	500 L	692×692×2000 mm	0~50℃	0~5500LX	50~90%RH

RTOP-800D	800 L	1265×650×1850 mm	0~50℃	0~5500LX	50~90%RH
RTOP-1000D	1000 L	1250×655×1895 mm	0~50℃	0~5500LX	50~90%RH

3 Technical index

3.1 Temperature range: 0～50℃

3.2 Temperature variation: ±0.5℃

3.3 Temperature unevenness: ≤1℃

3.4 Humidity Range: 50%~95%RH

3.5 humidity fluctuation: ±5℃RH（ when relative humidity >70%RH ）

3.6 Error: ±7%RH

3.7 Temperature, Humidity and lamination programmable sects: Model B (2 sets Day: sect 01;night:sect 02); Model D(1-30 sets)

3.8 Illumination Grade: 0~3

3.9 Communication interface: RS232(order by customer)

3.10 Heat up power: 400W (For RTOP-1000:700W)

3.11 Compressor power: 190W～320W.

3.12 Compressor delay protecting time: about 3 minutes

3.13 Noise: ＜70dB

3.14 Volume of in water bath in humidifier: 5L

3.15 Working style: Constant running (The compressor works at intervals)

3.16 Working environment: Temperature during 0～40℃;No erosive gas.

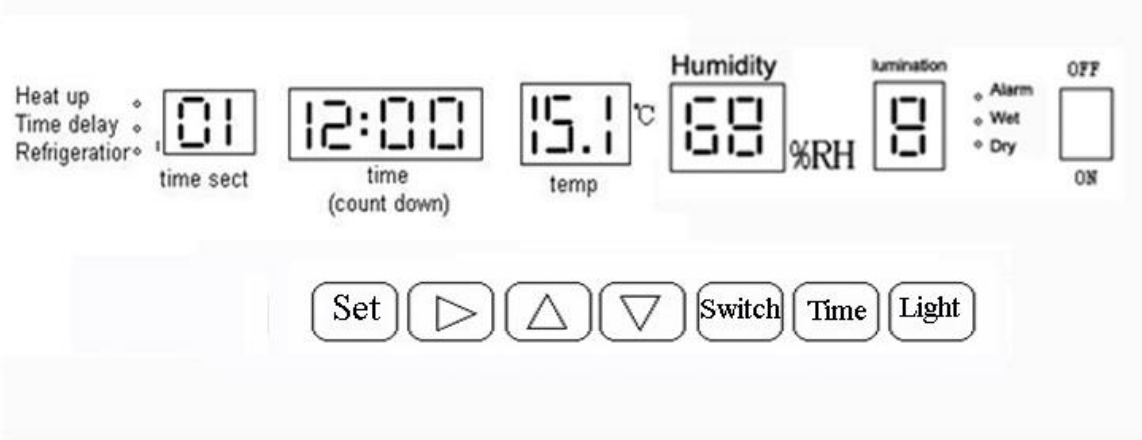
3.17 Power: 220±22V、50±0.5HZ

4. Instrument structure

4.1 Structure of the instrument body: The instrument body is composed of 4 parts, including the top cover, the work chamber, the cold &heat supplying chamber and the bottom chamber. The computer control heavy-current board is fit inside the Top Cover, while the computer control light-current board (Including digital monitor, indicator light and operation button) and power switch are fit above the Top Cover panel. N group of fluorescent lamps are hung separately at the gate and the side of the instrument body. A thermistance (viz. a temperature sensor) is fit at the back board of the work chamber. The cold &heat supplying chamber is placed at the up or down side of the work chamber, with its left or right side connected separately with the exit and entrance of the working chamber airiness way. The evaporator, anti-concreting baffle, electrothermal tube and 2 circulation fans are fit to supply heat or cold for the work chamber. A thermistance is also fit beside the electrothermal tube to protect it from excessive heat. Inside the bottom chamber are those components: the compressor, the condenser, cools down fan, the junction box of the instrument and the fuse. Box side with a Φ18 mm of wetting into the steam pipe and a humidifier 220 V control voltage 3-socket to control whether it work or not.

4.2 Humidifier structure: Vide Asia YC-D205-type ultrasonic humidifier user manual.

4.3 The panel makeup are shown below:



5. Operation instructions

5.1 Check the parameters settings

The set parameters are designed to be checked one by one in this instrument, when the instrument is turn on or running 5 seconds, Press Set Button. the time sect window is showing 01 and you can set Sect 01Temp, humidity, light. when you press the Set button again, the time sect window is showing 02. and you can set Sect 02 Temp, humidity, light. When you preess the Set button third time, he time sect window is showing 03. and you can set Sect 03Temp, humidity, light.If the number they give:"9", it is the 2 Sects model. You just need press Set button, the machine will back to returning operation condition. If the nubmer not give "9", it is the Sect 3. When the examination to press Set button when time window appeared number"9" words, then press Set button tests end. If no longer press Set button , after 10 seconds will be returning operation condition.

5.2 Parameters setting and change

Press Set button, The windows give 01 Sect. And time window is in flicker, then you can set the parameter of sect 01. Such as you need to sect01 at 9 hours, temp: 25 degree, Humidity at 80%RH, light at Grade 3.

Press button △▽, change the time windows give "0"

Press button ▷ 1 time, move the flicker number, and set the number at 9 by the button △▽

Press button ▷ 2 time, let the temp window number flicker, nd set the number at 25 by the button △▽

Press button ▷ 1 time, let the humidity window number flicker, nd set the number at 80 by the button △▽

Press button ▷ 1 time, let the light window number flicker, nd set the number at 3 by the button △▽

After all finish, Press Set button, the Sect nubmer change 01 to 02. Then you can set the Sect 2.

After You Set Sect 2, Press Set button, the Sect nubmer change 02 to 03. and the time window is in flicker, set the time to "9", press Set button returning operation condition. If you need just 1 Sect, you can set time to 24 hours. Then at the 2nd Sect, set the time to "9" then press Set button., if you need 2 sects, you at the 3rd Sect,Set time to "9" then press Set button… if you need n sects. You just need at the Sect n+1, Set time window to "9", then press Set button.

5.3 Time sect shift

After the parameter setting is completed and the instrument is in running mode, to shift the private work to you desired time sect, press the Switch button. Each press changes a time sect forward. Make sure that the pressing interval is less than 3 seconds.

5.4 Time shift of private time sect

In many circumstances, you might need the instruments time to be in accordance with the local time, or you might need to change the left time of the private time sect, then you should press the time button, after pressing ,the first No. of the "time" window will be shining while the seconds signal ":" stop shining. By the time, you may press △ (change the private value) and ▷ button to make the left time appropriate to you. After pressing the time again,

time shift is finished. (If you hadn't press the buttons above in 5 second, the changed value will be recorded automatically).

5.5 Zero point and full range point amend f the temperature amend

If you want to correct the temperature amending value, press Set button for more than 5 seconds till the time window shows LOCK, then press △ and ▷ button till the temperature window shows 111, press Set again, the time window will show P1 and the 1st No. of temperature window will be flicker, it indicates the private zero point shift value, you may use △ and ▷ button to change it: for example, if the digital display value were 1.5℃higher than zero point, set the zero point as -1.5℃.

P1—Mainly Temp amend

P2—Auxiliary temp amend

P3—Environment temp amend

rH—Humidity amend

F1—full range point amend（No need amend when temp less 45 degree）

C1—Refrigeration delay time

L1—Light level

0 — 5 lamp at one side.

Note: factory has zero and full degrees in the firm, please users don't arbitrary regulation

6. Trouble self-diagnosis

6.1 Automatic alarm when temperature runs ±2℃ out of the setting value

6.2 Compelled to stop heating when the work room temperature is higher than 52℃

6.3 Automatic alarms when the touch switches short circuit

6.4 Automatic alarm while stop heating and refrigeration when the temperature sensor break circuit or short circuit.

6.5 The protecting relay will be joined automatically while shutting down the heating power when the heating room temperature is higher than 55℃.

6.6 When the humidity sensor fault (or lower limit overflow spills), the police and to stop wetting and dehumidification.

7.Note:

7.1 For your safety, electrical wire of the receptacle should be eaething.

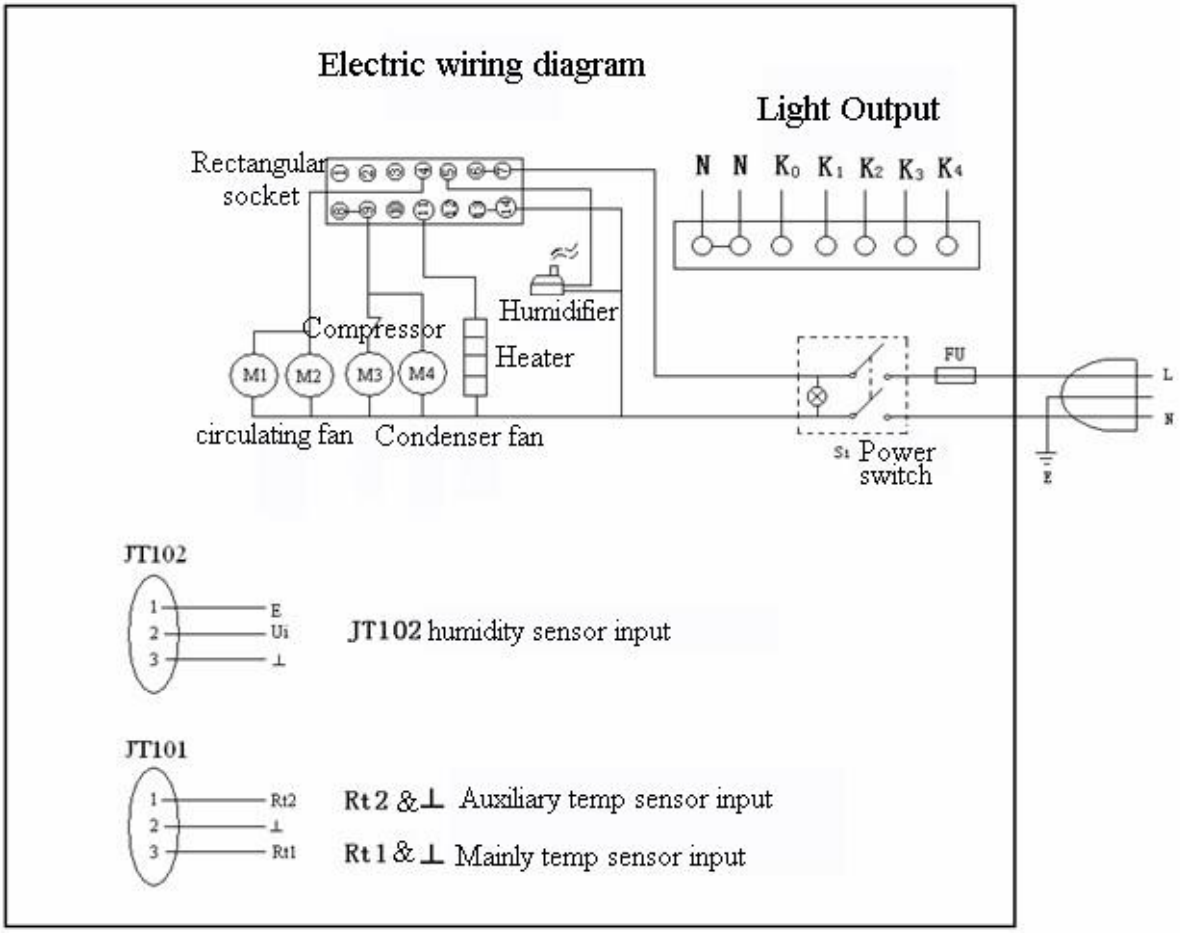
7.2 To make the Incubation Box work normally, while doing low temperature experiment below 10℃, the environmental temperature shouldn't be too high, the difference in temperature between the inside and outside of the instrument shouldn't exceed 20℃.

7.3 Low temperature (6 ℃ below) will have high humidity or radiant heating room warp the evaporator, so the icy instrument will automatically terminate humidifying, dehumidifying function (namely the humidity control). Users who have special requirements may be settled through friendly negotiation.

7.4. Because humidity transmitters inherent characteristic, if is chronically high humidity, more than 95% RH that failure (usually humidity display cap spill), so as far as possible need not 95% RH above high humidity.

7.5. Because humidifier using vacuum balanced water tank, so whenever tank from the base of the base after, should be pouring water light, in case the water running too in the base overflow into the base internal damage electronic components.

8.Electric wiring diagram (shown below)



·Electric wiring diagram·

9. Packing list

NO.	Items	Number	
1	Incubator	1	
2	Humidifier	1	
3	Lamp cover	2	
4	Use manual	1	
5	Certificate	1	
6	Guarantee Notice	1	
7	Fuse	2	

Certificate

This product conforms to the national industry standard JB / 6823-93 "biological artificially climate box technical conditions" requirement, approved for release.

The product of the consignment date one year, customers are completely comply with products in the instruction for use cases, no artificial reason damage, our company give free maintenance. One year warranty period of the date, invoice, bill lost to date shall prevail.

Product Name: Germination Incubator
Model: RTOP-500D
No.: 1PC
Inspector: jianwen yu
Inspectiong Date: 2011-4-28

Guarantee Card

Customer Name: _____

Customer Tel: _____

Customer Adds: _____

Beakdown of machinery

Maintain Statement:

1. The warranty is one full year.
2.The warranty date is from the delivery day.
3. In the warranty condition, the machine defects is Maintain for free, please send the machine to our company.
4. This Maintain Card can't be amended, or this card invalid.
5. Please keep this card well, this is the only proof for maintain.

You must pay for the maintain if you have one situation as following:

1.The time is out of the warranty.
2.Operation without the inspection .
3. Open the machine not by our company staff.
4. Without Maintain Card
5. Amend Maintain Card
6.The machine is not the same as the in the Maintain Card.
7. Damaged by force majeure
8. Above station is followed by the new clause.