DNP Series Electrothermal Stable temperature Incubator

Operation Manual

Ⅰ.Brief Introduction:

It is necessary for health care, medicine, biology, agriculture, scientific research departments to store bacteria, biological training.

Ⅱ.Technical data:

Model	**DNP- 9025A**	DNP-9030A	DNP- 9052A	DNP- 9082A	DNP- 9162A	DNP- 9272A
Power supply	**220V 50Hz**	220V 50Hz	220V 50Hz	220V 50Hz	220V 50Hz	220V 50Hz
power	**≤150W**	≤200W	≤250W	≤300W	≤400W	≤600W
Temperature range	**RT+5～65℃**	RT+5～65℃	RT+5～65℃	RT+5～65℃	RT+5～65℃	RT+5～65℃
Temperature fluctuation	**±0.5℃**	±0.5℃	±0.5℃	±0.5℃	±0.5℃	±0.5℃
Timer	**0-999min**	0-999min	0-999min	0-999min	0-999min	0-999min
Working size	**250*250*250mm**	300*300*350mm	350*350*410mm	400*400*500mm	500*500*650mm	600*600*750mm

Ⅲ.Structure:

Electrothermal Stable temperature Incubator is vertical shape. Its box inner made of stainless steel, and outer shell are made of high quality steel plate, which surface is sprayed by lacquer. Outside door has observation window with toughened glass, it can clearly observe the training items from window. Interior working chamber is made of stainless steel plate. Shelf can be easily mobile and changed shelf height. There is heat-resistant silicone rubber or asbestos cord between working chamber and box door to seal. There are three flat-planel heaters in the left, right and bottom of working chamber. Thermal insulation adopts ultrafine glass wool.

The operation functions are concentrated in the front of box, which are easy to operate ,for example : power switch ,temperature controller, etc. Temperature controller is microcomputer intelligent digital temperature control device, which adopts progressive warming up, restrains temperature overshoot at maximum limit. It also has self-regulation function, high accuracy of controlling temperature,

and setting temperature with protection device and tracking alarm function.

Ⅳ.How to use:

1. Turn power switch to "1",then power indicator is light, there is digital display on the temperature controller.

2. Adjust temperature controller and set temperature, then heat indicator is light, which also meaning the instrument starts heating.
   Detailed operations as follows:
   Turn power switch to "on", about 7 seconds, the upper of temperature controller displays actual temperature in the box, the lower is for setting temperature. Press ❮❯,the first line displays SP. press▲ or ▼ ,which can make the second line displays your required temperature;press ❮❯ again, the first line displays ST (press ▲ or ▼,which make the second line displays your required time. when ST is 0, the instrument cancels timing function; when ST is not 0, the instrument has timing function). Press ❮❯ once again, return to the standard model, then temperature controller finished setting, then instrument can normal work. In the ordinary way, the instrument heating for 90 minutes, temperature controller will enter into stable temperature state.
3. Open incubator door, put items need training into incubator, then close the door. If the door is opened for a long time, there will be temperature fluctuation in the box, that is a normal phenomenon.
4. During training/cultivating items, you'd better not open the door except for put in/out items, so as not to affect temperature.
5. Choose training time according to needs. After training, turn the power switch to "0". Please do not open the box door, if not remove items immediately.

Ⅴ.Precautions:

1. Incubator shell must effectively grounding to ensure safe use.
2. Incubator should be placed in door with good ventilation conditions, it is forbidden to place inflammable and detonable items on its surrounding.
3. Please keep space when you place the articles into working chamber.
4. Incubator should keep clean.

Ⅵ.Troubles and treatments:

Phenomena	Reason	Treatment
1. No electricity.	1. Not connect power supply well or wire breaks 2. Fuse breaks	1. connect power supply well 2.replace a fuse core.
2. No warming up in the box	1. Setted temperature is too low. 2. Heater is wrong. 3. Temperature controller is wrong	1. Adjust setted temperature. 2. Replace heater. 3. Replace temperature controller

	4．Fan is wrong	4．Replace fan.
3．There is magnitude error between setting temperature and actual temperature in the box.	1．Temperature sensor is wrong. 2．Not adjust temperature controller well	1．Replace temperature sensor. 2．Adjust temperature controller
4．Over-temperature Alarm abnormal	1．Setted temperature is low 2．Temperature controller is wrong	1．Adjust setted temperature 2．Replace temperature controller

Ⅶ.Schematic Circuit Diagram: