

High-Precision Refrigerated Thermostat Bath GH Series User Manual



Please read operating manual before installation and operation.

Drawell International Technology Limited

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I. General introduction

Super digital controlled thermostatic bath, which is the common equipment used in laboratory, is widely used by research departments of such fields as petroleum, national defense, chemical industry, physics, bioengineering, chemistry, medical care, life science, electronic instrument, quality control & metrology, high school, scientific research institution, as well as factory laboratory and metrology & quality control department.

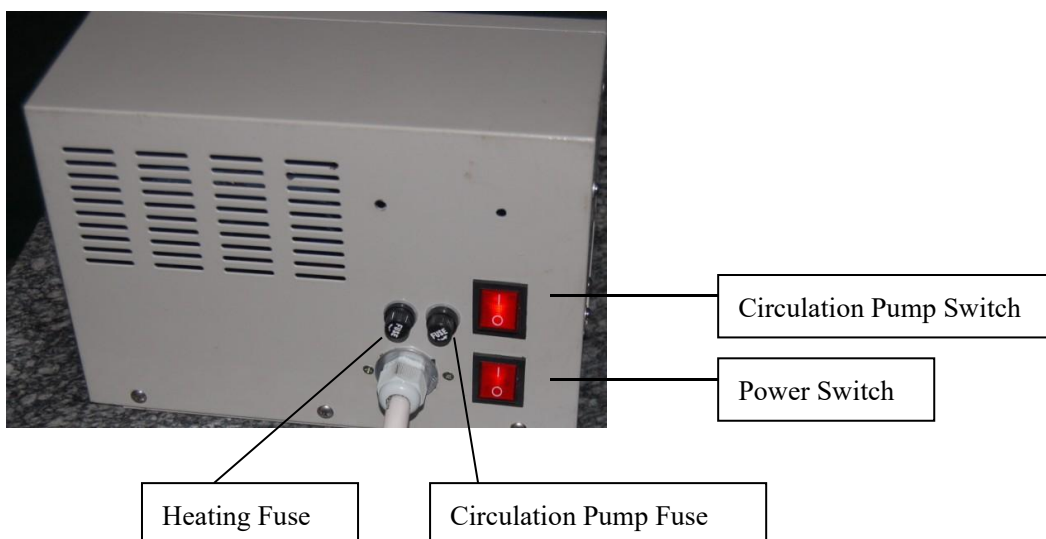
2. Features

1. The product, which adopts intelligent microcomputer control and is convenient to operate, has good temperature stability and such functions as over temperature alarm and PID automatic control.
2. It adopts double windows to display, the measured values in the up window are red and the set values in the low window is green (LED display).
3. The deviation in measured temperature value can be revised through the intelligent microcomputer, making the digital display resolution reach 0.001°C.
4. For special users, PID can be adjustable.

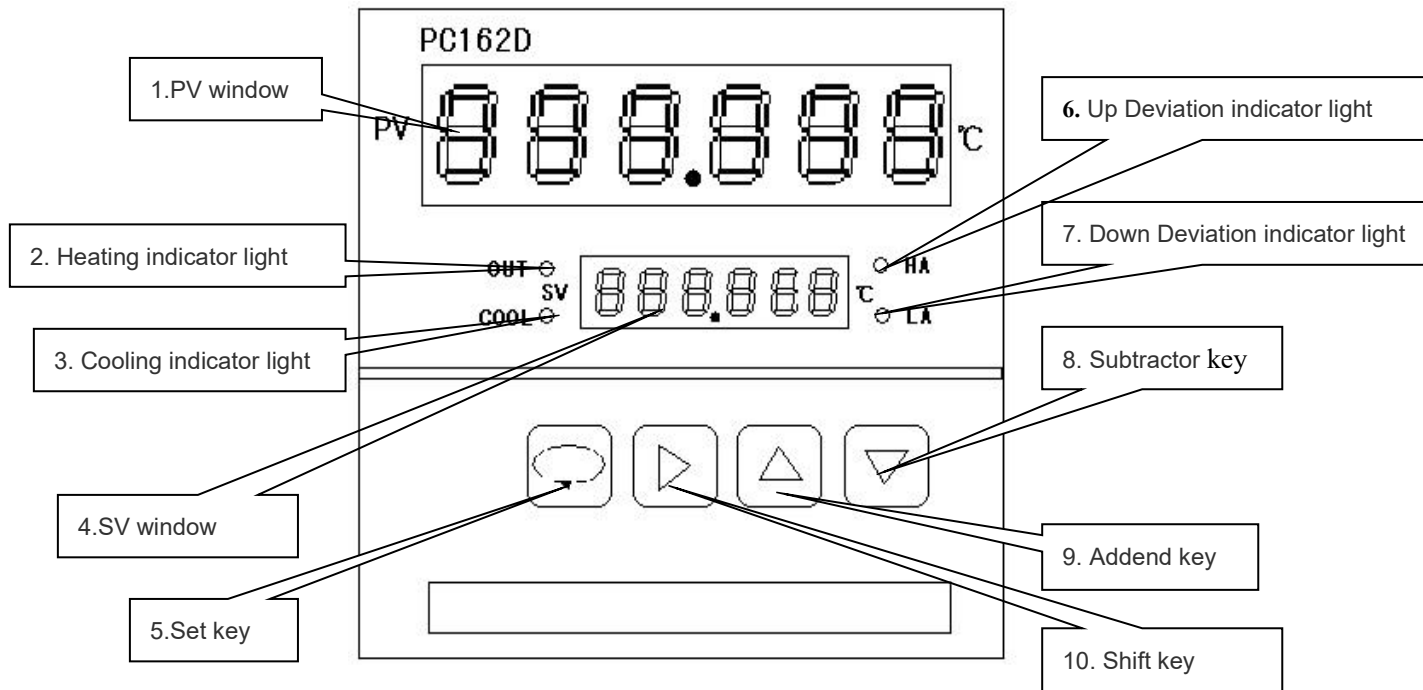
4. Operating procedure

1. Add liquid medium into the bath, and the distance between liquid level of the liquid medium and the workbench shall be less than 30mm.
2. Selection of liquid medium:
 - a) Generally, purified water shall be used as the liquid medium when the room temperature is between + 5°C - 80°C.

- b) Generally, 15% glycerine solution shall be used as the liquid medium when the working temperature is between 80°C - 90°C.
 - c) Generally, oil shall be used as the liquid medium when the working temperature is above 95°C, and the open cup flash point of the selected oil shall be 15°C higher than the working temperature. (**Note:** the working temperature means the temperature that shall be reached by the liquid medium in the bath).
3. Plug in, Open the power switch and circulation pump button. As picture 2,








4. Apparatus operation is as below:






Picture 3: Control Interface






The details:

1) Temperature setting:




Press  key , SV window' left the first number is flashing , and then press () key to move number to 000.00X、000.0X、000.X、single digit、decade, hundreds。For example : when press to 000.00X , 000.00X' number is flashing , meanwhile , you can press()addend key and()subtractor key to set number。After setting , and then set successively 000.00X、000.0X、000.X、single digit、decade、hundreds. So you get the temperature setting number what you want, after setting, press  key again , the number which is set will save automatically.



2) Correction of measured value:

To press  key for at least 5 seconds, till there is" LOC" display in PV window, to stop press  key, and then press (),to adjust the number of SV window to

100000, and then press  key, at this time, there is "SC" display in PV window, There is "000.000" display in the SV window, and the first number of left is flashing. To compare the thermometer (mercury thermometer or high precision digital thermometer) measurement of the liquid temperature data and display the temperature data, then correct the number. For example, display temperature is 30.540℃, the measured temperature is 30.600℃, so you can press () key to move to 0.0X flashing, and then press () or () to set 000.060 is ok. Measure correction value = measure temperature value - display temperature value. So: if measure correction value is -0.60, so correct value is set to -00.060. and then press  at least for 5 seconds and drop out. The data will be saved automatically.

3) The setting of Up Deviation value:

Press  at least for 5 seconds, till there is "LOC" display in PV window, and then press () key, to adjust the number in the SV window to 100000, and press  twice, at this time, there is "HA" display in the PV window, there is "000.000" display in the SV window, and first number of left is flashing.

After setting up deviation value, and press  key, there is "LA" display in the PV window, the same method, you can set down deviation value, after setting, and then press  key at least 5 seconds to drop out, the data will be saved automatically, if both up deviation value and down deviation value are set to 001.00, the setting temperature is 60℃, temperature error range is 60℃ ± 1℃, When the temperature under 59℃, LA alarm light, and the temperature higher

61°C, HA alarm light.

4) The correction of PID parameter:

The manufacturer adjust LOC to ***** (the password will provide by us), and then adjust PI,D to the value what you want,

5) The running:

After setting all parameters, the machine will run as per set value, "out" light is display the processing of heating.

5. Notes for use:

1. Liquid medium shall be added into the bath before use.
2. 110V/60Hz power supply shall be used. The power shall be larger than or equal to the total power of the instrument, and the power supply shall be provided with good "grounding" device.
3. The instrument shall be placed at a dry place with good ventilation condition, and the distance between the back, two sides of the instrument and barrier shall be above 300mm.
4. After the instrument is used, all the switches shall be in "off" status; pull out the power plug; pour the water in the bath and remove the water spots.
5. When the temperature is above 60°C, be careful not to touch the surface of the thermostatic bath, so as to prevent scald hands.

6. Packing list:

1. Mainframe	1	2. User Manual	1
3. Power line	1	4. Cover board	1
5. Fuse	2		

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