

Operation Manual



BIBD-204

BOD Incubator

Thank you for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

Index

1. Scope of Application.....	03
2. Technical Data.....	03
3. Structure.....	04
4. Operating Instructions.....	05
5. Precautions.....	06
6. Electrical Diagram.....	07
7. Troubleshooting.....	08
8. Functional Parameters.....	09

01 Scope of Application

This product is a high-precision thermostatic device form culturing and testing bacteria, molds and microorganisms, and is especially fit for use in scientific research and production in the field of medicine, health, drug test, environment protection, agriculture, agriculture, animal husbandry, etc.

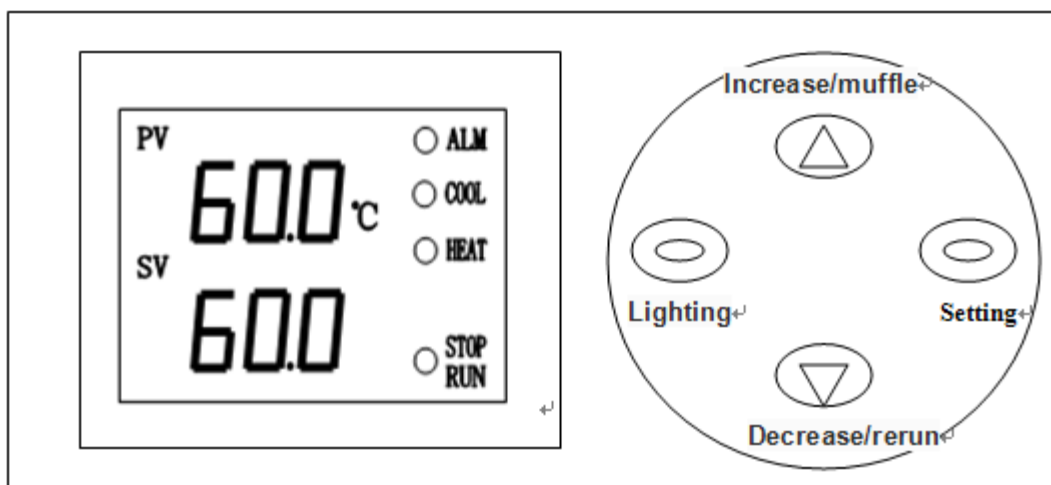
02 Technical Data

Model No.	BIBD-204
Capacity	400L
Refrigerant	134a
Ambient temperature	5-35°C
Temperature range	5~60°C
Temperature fluctuation	±0.5°C
Power supply	220V 50HZ
Max. power consumption	1000W
Remarks	"F" refers to fluorin-free refrigeration.

03 Structure

The casing of the product is made of high-quality steel plates and spray-coated with plastics; the operating chamber is made of stainless steel, which is corrosion-resistant. On the outer door, there is an observation window. The door is fitted with double-layer hollow glass, making it convenient for observing the tests and operations in the box.

Panel :



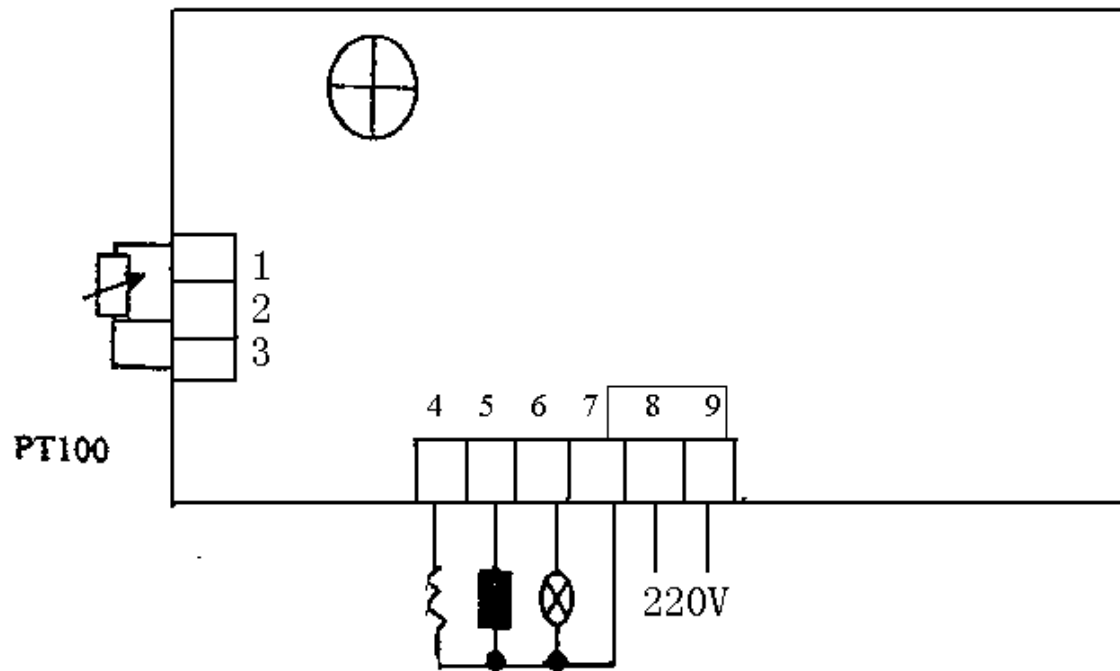
04 Operating Instructions

- (1) Turn the power switch to position "I", and the power indicator will flash on with digital display on the temperature control instrument. Press "Lighting switch" to switch on the lighting lamp or UV lamp (fitted in mold culturing box).
- (2) When there is a display of "888" 4S, the device will begin to operate, and the temperature-taking indicator will flash on. Press "Temperature/time", the controller will be in the state of temperature setting and the temperature-setting indicator will flash on with the window to the left of the controller showing the value of temperature setting. The temperature value shown on the window will flash, and the operator may change the value within the range of 0~60.0°C by pressing Δ or ∇ .
- (3) Press "temperature/time" again, the controller will be in the state of time setting, and the time-setting indicator will flash on with the window to the right of the controller showing the value of time setting. The operator may change the value (0~9999) by pressing Δ or ∇ . (If the time value setting is 0000, the timer will not work. Under this operating condition, the right window will show the temperature setting, and the operating time after the device connected with power supply will apply. So, this point shall be considered when the time value needs to be reset.)
- (4) Press "Temperature/time" again to quit setting. Keep "Temperature/time" pressed for 2 seconds to access parameter setting. Keep "Temperature/time" pressed for 2 seconds again to quit parameter setting. If no key is pressed under either of the two states above within 30 seconds, the controller will quit setting automatically, and the revised parameters will not be saved. When the operating time is finished, the window for time display will show "End" and the buzzer will buzz for 1 minute. The operator may keep the key ∇ pressed for 2 seconds to re-start the operating program.
- (5) When the sensor of the controller has a circuit break, the temperature window will show "□□□" on the upper line, and the buzzer will buzz. The operator may press Δ to stop the buzz. When the sensor has a circuit break, the temperature window will show "□□□" on the lower line. In this case, wire connection and the sensor shall be examined carefully, or the sensor be replaced by a new one.
- (6) After culturing is finished, the power switch shall be turned to "0" position. Please don't open the door, if the items are not to be taken out of the culturing box.

05 Precautions

- (1) Never keep the upper side down or make the culturing box inclined at an angle more than 45 degree in handling.
- (2) Frequent temperature setting shall be avoided to avoid frequent start of the compressor, which may lead to overload, which will shorten the life span of the device.
- (3) When no lighting is needed in the box, the lighting switch shall be turned to position "0" to avoid impact on the temperature of the upper level and extend the service life of the lamp.
- (4) It's not appropriate to place too many items into the culturing box. Appropriate space shall be kept between the items to ensure adequate air circulation in the cabinet.
- (5) Never touch or impact on the temperature probe in the cabinet in order to avoid damage of the probe, which may lead to the device out of control.
- (6) Never clean the surface with any acid, alkaline or other corrosive liquid. Use a piece of dry cloth to clean the surface. When the culturing box is not to be used, the interior of the box shall be kept dry; and the box shall be disconnected from power supply and all the switches shall be turned to position "0".
- (7) This device shall be operated and maintained by specialists. Only specialist electricians are allowed to examine and repair the culturing box. Never examine or repair when the culturing box is connected with power supply.
- (8) Please read this operating instruction carefully before operation.

06 Electrical Diagram



07 Troubleshooting

Problems	Possible causes	Solution
Culturing box does not work	No power supply Fuse broken Bad contact with power supply	Use it after power supply resumed Change the fuse Re-install the device
No refrigeration	Leakage of refrigerant Fine tubes blocked up Axial blower does not work	Have it repaired by a specialist Have it repaired by a specialist Examine or replace
Bad heating effect	Too many items for culturing Ambient temperature too high or too low Door opened too frequently Axial blower does not work Inappropriate temperature setting	Keep appropriate space Ambient temperature 0~30°C Reduce the frequency of door opening Re-set the temperature value
No heating	Relay or heating device damaged	Replace
Compressor does not work	Power voltage too low or too high	Check the power supply to make sure it conforms to requirements
Creepage on casing	No grounding wire or inadequate ground connection	Stop using the instrument and re-install the device

08 Functional Parameters

Parameter s	Item names	Explanation	Scope (at the time of delivery)
Lc-	Pass word	When "Lc=3", parameters can be referenced and modified.	
AL	Alarm for excessive temperature	When $PV > SP + AL$, there will be over-temperature alarm. The buzzer will buzz.	0.0~60.0(3.0)°C
ct	Retard of compressor start	Retard protection time for compressor, time for starting twice $> =ct$ minutes	0~10(3)Min
Pb	0 setting	For revising the errors of sensor	-99.9~60.0(0) °C
PK	Fullness adjustment	When there is error of actual temperature, correction can be made by adjusting this value. $PK=1000^*$ (reading on the thermometer – current temperature value)/ current temperature value	-999~999(0)
up	Temperature rise, refrigeration, difference	When temperature goes up, this parameter can enable the compressor to start working earlier, namely, when $PV \geq SP + uP$ and retard time $> ct$, there will be refrigeration output and the corresponding indicator will flash on. This begins to work only when the alarm lamp flashes.	-1.0~1.0(0.2) °C
dn	Temperature decline, refrigeration, difference	When temperature goes down, the parameter can enable the compressor to stop working earlier. When $PV < SP + dn$, refrigeration output will stop. This begins to work only when the alarm lamp flashes.	-1.2~0.8(0.1) °C



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