



DRYING OVEN

BODR-103

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1. Safety warning before use

Must prohibit items

1. Do not store volatile, flammable, or explosive materials in this device, as it may cause explosions or fires.
2. Do not place this device in a place that is exposed to rain, moisture, or may splash water, otherwise it may cause accidents such as leakage, short circuit, or electric shock.
3. Non professional technicians are not allowed to disassemble, repair, or modify equipment, otherwise improper operation may cause fire or electric shock accidents to personnel.

Must comply with items

1. This device should be installed on a solid ground. If the ground is not solid enough or the installation location is not suitable, personnel may be injured due to equipment overturning.
2. Please use the dedicated power supply indicated on the nameplate of this device, and the power socket must be grounded. This device must be reliably grounded to prevent accidental electrical leakage that may cause electric shock or fire.
3. Before carrying out any repairs or maintenance on this equipment, be sure to disconnect the power supply to prevent electric shock or personal injury.
4. When repairing or maintaining equipment, it is necessary to wear gloves to prevent personal injury caused by touching edges or sharp corners.
5. If any abnormalities are found in the operation of the device, immediately unplug the power plug and stop the device from running. Operating under abnormal conditions may cause electric shock or fire.

2. Main features of product

1. The shell is made of high-quality cold-rolled steel plate, and the surface is treated with spray painting technology, with a novel and beautiful appearance;
2. The inner liner is made of stainless steel plate or cold-rolled steel plate, which has undergone anti-corrosion treatment and processed into shape;
3. There is a glass observation window in the middle of the box door, which can observe the situation of heated items in the studio at any time;
4. The door of the box is embedded with high-temperature resistant rubber strips, which have good sealing performance and prevent heat loss;
5. The temperature of the digital display studio is easy to observe and read;
6. The temperature controller with time proportional adjustment function and high-precision PT100 sensor are used as the temperature measurement and control system of this equipment, with small measurement errors and high temperature control accuracy;
7. An exhaust valve is installed on the upper side of the studio, which can discharge the moisture released by the heated object from the box at any time during the working process, and can also be used as a testing hole.

3. Technical specification

Model		BODR-103	
Cycle Mode		Forced convection	
Function	Temp. Range	RT+10-250°C	
	Temp. Resolution Ratio	0.1°C	
	Temp. Motion	±1°C	
	Temp. Uniformity	±2.5%	
Structure	Inner Chamber	B model:High quality stainless steel; without B model:High strength galvanized sheet	
	Outer Shell	Cold rolling steel electrostatic spraying exterior	
	Insulation layer	High quality rock wool board(with CE)	
	Heater	101 model with Stainless steel electric heating tube; 202 model with Nickel chromium alloy heating wire	
	Power rating	1.6kW	2.3kW
Controller	Temp. control mode	Two temperature section PID intelligent	
	Timer	0-9999min(with timing wait function)	
	Sensor	pt100	
Specification	Inner Chamber size(W*L*H)(mm)	450*350*450	550*450*550
	Exterior size (W*L*H)(mm)	752*472*687	852*572*786
	Packing size (W*L*H)(mm)	845*605*850	955*705*950
	Volume	71L	136L
	Shelf number	13	17
	Load per rack	15kg	
	Shelf space	25mm	

Table 1

4. Instrument operation and display instructions

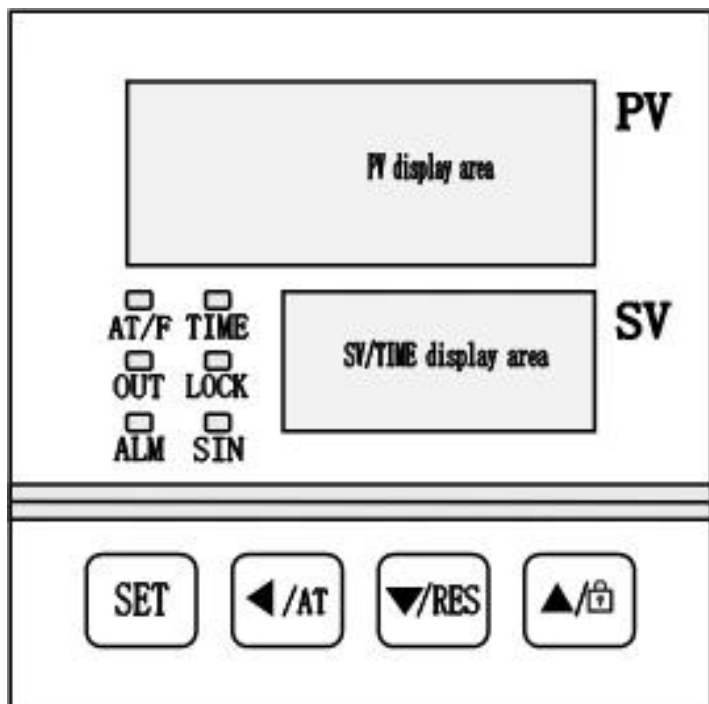


Figure 1

—, Panel indication

Key Definition

1. **【SET】**: Set key, in the main interface display state, click this key to enter the temperature and time target value setting state, long press this key for 3 seconds to enter the internal parameter setting state.
2. **【◀/AT】**: Shift/self-tuning key, clicking this key in the set state can cause the set value to shift and flash for modification.
3. In the main interface display state, long press this button for 6 seconds to enter the temperature self-tuning selection state.
4. **【▼/RST】**: Reduce/Run button, click or long press this button in the set state to decrease the set value.
Press and hold this button for 3 seconds in the main interface and at the end of the run state to restart the operation.
5. **【▲/🔒】**: Add/Lock screen button, click or long press this button in the set state to increase the set value. If the lock screen function is selected, in the main interface display state, click this button to lock or unlock the screen.

PCE-E9000 Definition of indicator lights:

1. **【AT/F】** Indicator light: When the temperature unit is Fahrenheit, this light will turn on. During the temperature self-tuning process, this light will flash, and in other states, it will turn off.
2. **【TIME】** Indicator light: Illuminates when there is a timing setting, flashes during the reservation timing

process, and goes off when there is no timing function。

3. 【OUT】 Indicator light:When there is heating output, this light will turn on, otherwise it will turn off。

4. 【LOCK】 Indicator light:Illuminates in lock screen mode, otherwise extinguishes。

5. 【ALM】 Indicator light:When there is a temperature deviation alarm, temperature measurement abnormality, and water shortage alarm, this light will light up. When there is a temperature deviation alarm, this light will flash. Under normal conditions, this light will go out.

6. 【SIN】 Indicator light:When there is a water shortage alarm, this light flashes, otherwise it goes out.

二.Operation and usage methods

1.Click the SET button to display "SP", and proceed with the ◀▲▼ key to set the temperature value; Click the SET button again to display "ST", which can be accessed through ◀▲▼ key to set the time value; Click the SET button again to exit.

三.Reference and setting of internal temperature parameters

In the main interface display state, long press and hold the [Set] button for 3 seconds. The password prompt Lc will be displayed in the PV area, and the password value will be displayed in the SV area. Use [Increase], [Reduce], and [Shift] to modify the desired password value. Then click the [Set] button. If the password value is incorrect, the instrument will automatically return to the main interface display state. If the password value is correct, enter the internal parameter setting state, and click the [Set] button to modify each parameter in sequence. During this process, long press the [Set] button for 3 seconds to exit this state, and the parameter values will be automatically saved. Please refer to the table below for details:

Explanation: In the parameter table, the temperature set value is abbreviated as SP, and the temperature measured value is abbreviated as PV. 2) In the table below, if it is a PT100 instrument, M=400.0 °C; if it is a K-type instrument, M=600.0 °C

Indicator	Parameter Name	Parameter Function Description	(Scope) Factory production
Lc	password	When Lc=3, parameter values can be viewed and modified.	0
ALH	Upper deviation Over temperature alarm	When $PV > SP + ALH$, there is an upper deviation over temperature alarm.	(0~100.0°C) 20.0
ALL	Lower deviation Over temperature alarm	When PV Explanation: When ALL=0, the lower deviation alarm is invalid.	(0~100.0°C) 0
Pb	Correction of measurement temperature deviation	Used to correct errors generated during temperature measurement. $Pb = \text{actual temperature value} - PV$	(-50.0~50.0°C) 0
PL	Measurement temperature slope correction	Usually used to correct errors generated during high-temperature measurements $PL = 1000 * (\text{Actual temperature value} - PV) \div PV$ explain:When En=1 in Parameter Table-4, This feature is invalid.	(-999~999) 0

ndT	Timing method	0: No timing; 1: Constant temperature timing; 2: Run timing	(0~2) 1
Tdn	Timing direction	0: Positive timing; 1: Countdown	(0~1) 0
Hn	Timing unit	0:min; 1:hour	(0~1) 0
SPd	Constant temperature deviation	When $SP - SPd \leq PV \leq SP + SPd$, Entering a constant temperature state.	(0.1~50.0°C) 0.5
EST	Timed end Prompt time	After the timer is over, the buzzer will indicate the time. Note: When EST=9999, it indicates a permanent prompt.	(0~9999second) 60
EH	Timed end Constant temperature control	0: Turn off the heating output after the timed end; 1: Continue constant temperature control after the scheduled time is over.	(0~1) 0
LF	Lock screen function	0: No lock screen function; 1: Equipped with lock screen function, no need to unlock password, 2: It has a lock screen function and requires unlocking the password.	(0~2) 0
LdT	Lock screen delay	In the main interface display state, if there is no key pressed after delaying LdT time, the controller will automatically lock the screen. Explanation: When LdT=600, the delayed screen lock function is invalid.	(10~600second) 30
PAd	Unlock password	You must enter this password to unlock.	(0~9999) 1
Add	Mailing address	Local communication address Explanation:ThePCE-E9000 instrument panel has no communication function.	(1~32) 1

Table 2

Indicator	Parameter Name	Parameter Function Description	(Scope) Factory value
Lc	password	When Lc=567, parameter values can be viewed and modified.	0
rST	factory reset	0: Cancel; 1: Confirm.	(0~1) 0

Table 3

5. Instrument wiring diagram

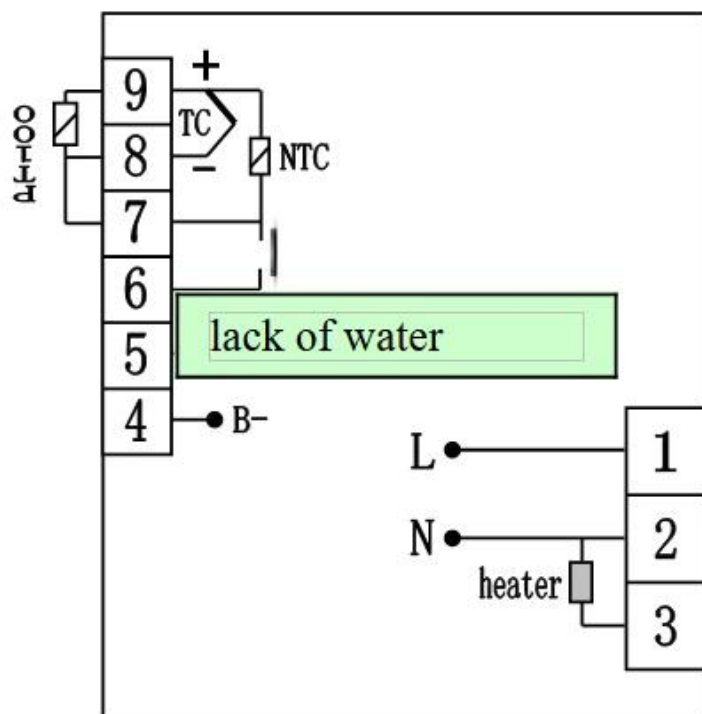


Figure 2

6. General faults and troubleshooting methods

Fault phenomenon	Fault inference	Fault handling methods
No display on startup	Power supply not connected	Check for voltage in the power socket
	The power plug is not properly plugged in	Check if the contact between the power plug and the socket is reliable
	The power switch is not turned on	Turn on the power switch on the right side of the instrument
	The fuse on the box is damaged	Replace the power fuse with the same specification
The measured temperature is higher than the set temperature or the instrument enters a high temperature alarm state	The box door is not tightly closed	Close the box door tightly
	The instrument has not yet entered a constant temperature state	Wait for a moment before making an observation
After turning on, the temperature does not display and does not rise	The power cord is not properly plugged in	Insert the power cord properly
	Sensor malfunction	Notify the factory for repair

Table 4



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