

PR331

Short Multi-zone Temperature Calibration Furnace



Keywords:

- Short type, thin film thermocouples calibration
- Are heated at three-zones
- The position of uniform temperature field is adjustable

I .Overview

PR331 short-type temperature calibration furnace is specially used to calibrate short-type, thin-film thermocouples. It has the function of adjusting the position of the uniform temperature field. The uniform temperature field position can be selected according to the length of the calibrated sensor.

Using innovative technologies such as multi-zone coupling control, DC heating, active heat dissipation, etc., it has excellent **temperature field uniformity and temperature fluctuation covering the full temperature range**, greatly reducing the uncertainty in the traceability process of short thermocouples

II.Features

1. The position of uniform temperature field is adjustable

Using **three-temperature zone heating** technology, it is convenient to adjust the uniform temperature field position. In order to better match thermocouples of different lengths, the program presets the front, middle and rear options to correspond to the uniform temperature field at three different positions

2. The full range temperature stability is better than 0.15°C/10min

Integrated with Panran's new-generation PR2601 main controller, with 0.01% electrical measurement accuracy, and according to the control requirements of the calibration furnace, it has made targeted optimizations in measurement speed, reading noise, control logic, etc., and its full-range temperature stability better than 0.15°C/10min.

3. Full DC drive with active heat dissipation

The internal power components are **driven by full DC**, which avoids the disturbance and other high voltage safety hazards caused by leakage at high temperature from the source. At the same time, the controller will automatically adjust the ventilation volume of the outer wall of the insulation layer according to the current working conditions, so that the temperature in the furnace cavity can reach the equilibrium state as soon as possible

4. Various types of thermocouples are available for temperature control

The size and shape type of short thermocouples are quite different. In order to adapt to different thermocouples to be calibrated more flexibly, a thermocouple socket with integrated reference terminal compensation is designed, which can be quickly connected to temperature-controlled thermocouples of various index numbers.

5. Powerful software and hardware function

The touch screen can display general measurement and control parameters, and can perform operations such as timing switch, temperature stability setting, and WIFI settings.

III.Specifications

1. Product Model and Specifications

Performance/Model	PR331A	PR331B	Remarks
Position of uniform temperature field is adjustable	●	○	Optional deviation geometric center of the chamber of the furnace ± 50 mm
Temperature range	300°C ~ 1200°C		/
Dimension of the chamber of the furnace	$\phi 40\text{mm} \times 300\text{mm}$		/
Temperature control accuracy	0.5°C , when $\leq 500^\circ\text{C}$ 0.1%RD , when $> 500^\circ\text{C}$		Temperature at the center of the temperature field
60mm axial temperature uniformity	$\leq 0.5^\circ\text{C}$	$\leq 1.0^\circ\text{C}$	Geometric center of the chamber of the furnace $\pm 30\text{mm}$
60 mm axial temperature gradient	$\leq 0.3^\circ\text{C}/10\text{mm}$		Geometric center of the chamber of the furnace $\pm 30\text{mm}$
The radial temperature uniformity	$\leq 0.2^\circ\text{C}$		Geometric center of the chamber of the furnace
Temperature stability	$\leq 0.15^\circ\text{C}/10\text{min}$		/

2. General Specifications

Dimension	370×250×500mm (L*W*H)
Weight	20kg
Power	1.5kW
Power supply condition	220VAC $\pm 10\%$
Working environment	-5 ~ 35°C , 0 ~ 80%RH, non-condensing
Storage environment	-20 ~ 70°C , 0 ~ 80%RH, non-condensing