Safety Instructions

⚠ ⚠ Warning

A warning indicates a situation that may cause harm to the user. To avoid personal injury or instrument damage, please follow the following instructions:

- Make sure the place is free of oil and chemicals, no inflammable and explosive articles!
- Working environment is 0℃~ 40℃, do not put into high and low temperature box without permission, to avoid accidents!
- Must use an earthing socket in case of accidental electric shock!
- Blackbody cannot be used for applications other than temperature testing and calibration!
- Do not change the blackbody range without permission, in case of damage to the blackbody or cause safety accidents!
- Do not remove or modify blackbody without permission! The product is not guaranteed if the label is torn or damaged.

⚠ Caution

To avoid damaging the instrument or affecting the measurement accuracy, please follow the following instructions:

- Do not touch the radiant surface of blackbody to avoid scratches on the radiant surface of blackbody and affect the temperature measurement accuracy.
- Indoor use only. There should be no obvious air convection and strong light irradiation, no strong electromagnetic interference

and vibration.

- It is necessary to reserve heat dissipation space and keep at least 10cm away from surrounding objects.
- **Safety life:** the safety of blackbody can not be guaranteed after five years from the date of purchase (no matter whether the product is used within five years or not). Beyond this service life, the components may appear aging and failure. In order to ensure the efficiency of blackbody operation and the safety of electricity consumption, it is recommended that users repurchase or scrap blackbody beyond the safe service life.

1. Product overview and features

Human temperature measurement blackbody (Hereinafter referred to as blackbody). Product features are as follows:

- The imported intelligent temperature control meter is used to control the temperature with high precision and good stability.
- The target surface is coated with high emissivity aviation coatings.
- Compared with the same type of products, cost-effective.

2. Product pictures

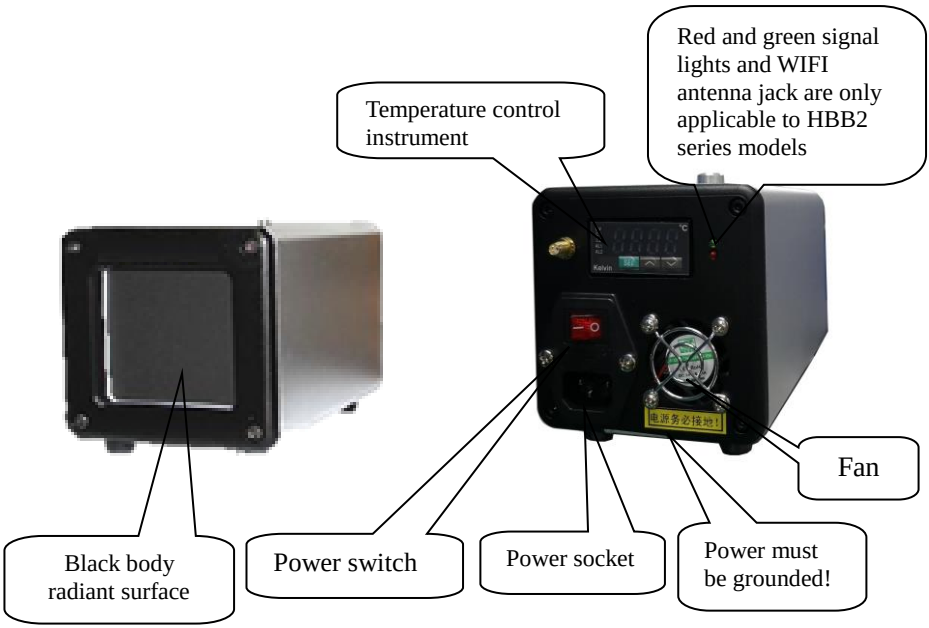

Figure 1: Product picture

3. Parameters

Working temperature	Factory settings□35.0℃ □37.0℃ □40.0℃ （Environment temperature +5.0℃～50.0℃ adjustable）
Effective radiant surface	70mm×70mm
Temperature resolution	0.1℃
Temperature accuracy	±0.2℃(single point)
Temperature stability	±(0.1～0.2)℃/30min
Effective emissivity	0.97
Temperature sensor	Pt100
Power supply	220VAC 50Hz 35W
Net weight	1.8 kg
Dimensions	W110 mm× H120 mm ×D180 mm
Ambient temperature/humidity	0℃~40℃/ ≤80%RH

4. Steps

4.1. Connect

Connect one end of the power cord configured by the factory to the power outlet on the back of the blackbody and the other end to the three-hole 220VAC/10A power outlet.

4.2. Temperature setting

a. Turn on the power switch on the back of the blackbody and the red indicator light is on.

b. See "3.Parameters" for the preset factory temperature of the boldface. The operation can start when PV value is stable and consistent with SV value.

c. Blackbody operating temperature can be adjusted according to the need of the field. Press the "SEL" button (see figure 2), the "SV" indicator, press "∧" or "∨" button to increase or decrease the working temperature, and then press "SEL" to confirm. (See the table for the parameters of the control panel: temperature control instrument panel instructions.)

d. At the end of the work, turn off the power switch on the back of the blackbody.

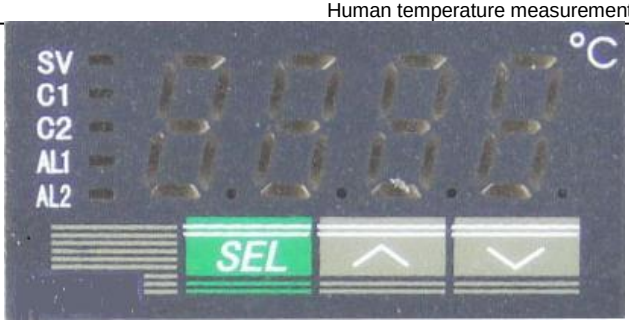

Figure 2: schematic diagram of temperature control instrument panel

Temperature control instrument panel instructions

Parameter	Name	Function
C1	Control output 1 indicator light	This light is ON when control output 1 is ON
C2	Control output 2 indicator light	This light is ON when control output 2 is ON
AL1	Alarm lamp 1	When the alarm output 1 is ON, the light will be ON
AL2	Alarm lamp 2	When the alarm output 2 is ON, the light will be ON
SV	Set value display	Indicates the target temperature
SEL	Parameter selection key	Used to select and set the parameter set /Use to toggle display SV value /PV value
∧	Increase key	Increase the SV value
∨	Decrease key	Decrease the SV value

4.3. Common faults

Serial number	Fault phenomenon	Cause → solution

1	No display on startup	Fuse is broken → replace the fuse
2	Display UUUU	Short circuit of sensor → return to factory for maintenance
		Temperature overrange → lower temperature
3	Display LLLL	Sensor break - return to factory for maintenance
4	Display FRL7	Control output is uncertain → return to factory for maintenance
5	Fan does not work	Fan is broken → return to the factory for repair
		Fan noise - add lubricating oil
6	After setting SV value, PV value does not respond.	The heating wire burns off → return to the factory for maintenance
		SV value is close to room temperature → change SV value
		Temperature control element failure - return to factory for maintenance

5. Calibration

To ensure the accuracy of blackbody temperature measurement, it is recommended to send the black body to Dahua for calibration regularly. The calibration cycle is usually one year.

6. Maintenance

a. The blackbody shall be managed and maintained by the designated personnel, keeping records of maintenance and use.

b. When not in use, put the equipment into the packaging box, and ensure the storage environment temperature and humidity appropriate.

c. It is recommended to use a neutral cleaner to clean the blackbody shell and a soft brush to clean the dust on the radiant surface of the blackbody.

The appearance and dimension of the product shall be subject to the actual delivery.