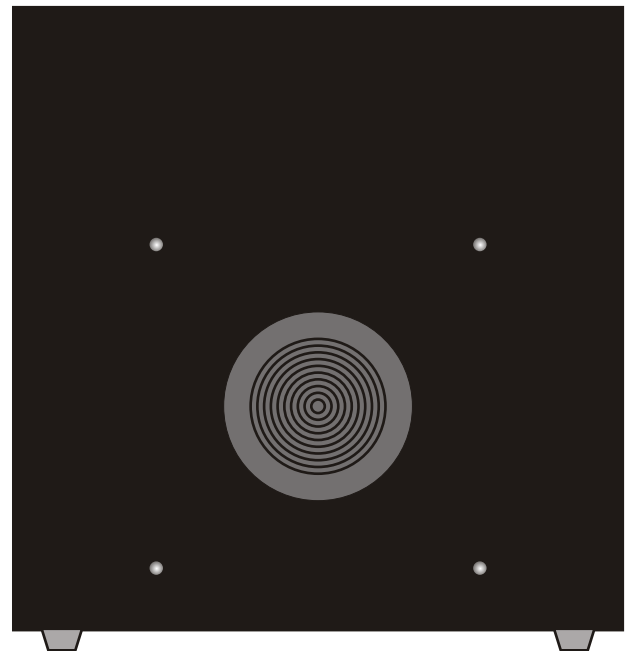


988

ISOTECH

Blackbody Source



Description

This blackbody source is particularly suitable for the calibration of thermal imagers.

It comprises a heat / cool ridged blackbody source of 70mm diameter whose temperature can be set from 20°C to 45°C to a resolution of 0.01°C.

Features

Combined stability / accuracy of $\pm 0.2^\circ\text{C}$ using contact thermometry.

Emissivity is better than 0.97 ± 0.02 .

Evaluation at Land Pyrometers showed the advantages of fitting a stainless steel tube around the plate to give better uniformity and less sensitivity to draughts and ambient temperature effects.

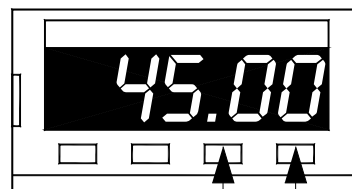




Model No.	988
Temperature Range	20°C to 45°C (70°F to 115°F)
Resolution	±0.01°C
Target Size	70mm diameter
Emissivity	Greater than 0.97 ± 0.02
Combined Accuracy / Stability	±0.2°C (±0.3°F)
Power	70W
Voltage	12 V.D.C.
Dimensions	Height 230mm Width 225mm Depth 115mm
Weight	4kg
Accessories	Switch Mode Power Supply Supplied as Standard
How to Order	988

Altering the Block Temperature, (Setpoint)

1. Switch the unit on. The power switch is located on the front panel.
2. The controller will briefly show its software version before displaying an indication of the block temperature.



- (A) 'DOWN' Key
- (B) 'UP' Key



3. Momentarily press either the UP or DOWN key once to display the setpoint (desired temperature).
4. To alter the value press and hold the UP key to raise the value or the DOWN key to lower the value.
5. The display will return to show the nominal block temperature when no key is pressed for



The other controller functions are hidden from the operator. The values are pre-set and should not be changed.



Safe Use

Do not use in wet or damp environments.

Care should be taken to avoid handling the calibration area when hot - Risk of Burns - Keep flammable items away.

Cool before placing in carry case.

No liquids should be used.

Read this instruction leaflet before use.

No user Serviceable parts, do not dismantle.

Not for use in Hazardous Areas.

Disconnecting device: The 988 Blackbody can be isolated by removing the power cable.



Cautionary Note

Failure to follow these instructions could result in fatal injury or cause damage to the product.

Isotech products are intended for use by technically trained and competent personnel familiar with good measurement practices.

It is expected that personnel using this equipment will be competent with the management of apparatus which may be powered or under extremes of temperature, and are able to appreciate the hazards which may be associated with, and the precautions to be taken with, such equipment.



The 988 Blackbody's optional power supply are provided with an approved power cord. If the plug is not suitable for your location then the plug should be removed and replaced with an appropriate plug.

Take care to ensure the old plug is disposed safely. The cable is colour coded as follows:

COLOUR	FUNCTION
Green / Yellow	Earth (Ground)
Brown	Live (Line)
Blue	Neutral

Please ensure that your unit is correctly connected to the electricity supply.

Unpacking and Initial Inspection

Our packing department uses custom designed packaging to send out your unit, after unpacking the unit, to inspect it for any sign of shipping damage, and confirm that your delivery is in accordance with the packing note. If you find any damage or that part of the delivery is missing please notify us or our agent, and the carrier immediately. If the unit is damaged you should keep the packaging for possible insurance assessment.

Electrical Supply

Before connecting to the electricity supply please familiarize yourself with the parts of this handbook relevant to your model.

Your unit's supply voltage requirement is specified on a plate on the instrument along with the serial number. All instruments will work on an electricity supply frequency of 50Hz or 60Hz.

The 988 Blackbody is powered from a 12V D.C. Switch Mode power supply, or a 12V, 7Ah Battery.

Trouble Shooting.

988 Blackbody does not power up . . .

Check the switch position

Check the power supply

Check the connecting lead

The temperature controller includes diagnostic alarms that warn if an internal error occurs in the controller.



Alarm	What It Means	What to Do
S.br	Internal Sensor Fail	Return for Repair
Err1	Internal ROM Self Test Failure	Return for Repair
Err2	Internal RAM Self Test Failure	Return for Repair
Err3	Watchdog Failure	Return for Repair
Err4	Keyboard Failure	Switch the Power off and then on without touching any of the controller buttons. If the fault persists return for repair.



EMC INFORMATION

This product meets the requirements of the European Directive on Electromagnetic Compatibility (EMC) 89/336/EEC as amended by EC Directive 92/31/EEC and the European Low Voltage Directive 73/25/EEC, amended by 93/68/EEC.

The product meets the susceptibility requirements of EN 50082-1, criterion B.

System Identification	Publication	Description
	ISO3864	Caution (Refer to this leaflet)
	IEC 417	Caution Hot Surface



Electrical Safety

This equipment must be correctly earthed.

This equipment is a Class 1 Appliance. A protective earth is used to ensure the conductive parts can not become live in the event of a failure of the insulation.

The protective conductor of the flexible mains cable which is coloured green / yellow MUST be connected to a suitable earth.

The Blue conductor should be connected to Neutral and the Brown conductor to Live (Line).

Warning: Internal Mains Voltage Hazard.

Do not remove the panels.

There are no user serviceable parts inside. Contact your nearest Isotech agent for repair.

Voltage transients on the supply must not exceed 2.5kV.

Conductive pollution, eg Carbon dust, must be excluded from the apparatus. EN61010 pollution degree 2.

Environmental Ratings

Operating Temperature 5 - 35°C

Relative Humidity 5 - 95%, non condensing



GUARANTEE

This instrument has been manufactured to exacting standards and is guaranteed for twelve months against electrical break-down or mechanical failure caused through defective material or workmanship, provided the failure is not the result of misuse. In the event of failure covered by this guarantee, the instrument must be returned, carriage paid, to the supplier for examination and will be replaced or repaired at our option.

FRAGILE CERAMIC AND/OR GLASS PARTS ARE NOT COVERED BY THIS GUARANTEE.

INTERFERENCE WITH, OR FAILURE TO PROPERLY MAINTAIN THIS INSTRUMENT MAY INVALIDATE THIS GUARANTEE.

RECOMMENDATION

The life of your **ISOTECH** Instrument will be prolonged if it is kept clean and free from general dust and debris.

The company is always willing to give technical advice and assistance where appropriate. Equally, because of the programme of continual development and improvement we reserve the right to amend or alter characteristics and design without prior notice. This publication is for information only.