EDIR-500 INSTRUCTION MANUAL

Infrared Flate Plate/ Black Body Calibrator

Temperature Range: 50°C to 500°C

Tunix Corporation, MS1-A, New siyaganj, Opp Mall godown Road, Indore 452001, MP, India. Mail :products@tunix.co.in, +91-6264901140

TABLE OF CONTENTS

PREFACE

Congratulation on purchase of “Tunix” make Flate plate/ Black Body Temperature Calibrator model EDIR-500 This instruments is one of the best available in its class.

We have taken enough care in designing and manufacturing to give you trouble free performance

STANDARED ACCESSORIES

Please check for following Standard accessories/Observation upton receipt of the product

1) Product is not physically damaged.
2) Operating manual With Warranty certificate
3) Power Chord.
4) Carrying Bag(optional if orderd)
5) General Calibration Certificate.(Not accredited to 17025)
6) 17025 accredited calibration certificate(optional if orderd).
7) K type thermocouple for referance temperature measurement (optional if orderd).

TECHNICAL SPECIFICATION

1) Temperature Range: 50 to 500 ˚C.
2) Display resolution 0.1 ˚C
3) Control accuracy: better than ± 0.1 ˚C
4) Thermal Non uniformity(Radial) : ± 0.15 ˚C (Applicable for 40 mm dia)
5) Thermal stability
   ± 0.1 ˚C upto@500 ˚C (calculated after stabilization time of 10 minutes).
6) Power supply: 230 VAC @50-60 Hz.
7) Time to reach 50° C to 400˚C (25 Minutes).
   Time to reach 50° C to 500˚C (50 Minutes).
8) Stabilization Time/settling time: 10 minutes after set point is achieved
9) Emissivity: 0.95 +/- 0.15
10) Power Consumption: single phase , 1200 Watt maximum.
11) Current : 5A
12) Sound: 20 dB Maximum.
13) Enclosure Metal(MS) Powder coated.
14) Weight: 4. 5 kg without bag.
15) Dimensions: L: 250mm, H: 120mm, W: 200mm.

OPERATING PRINCIPLE

For temperature calibration you require a stable known temperature source. The certainty of the calibration depends on

1) Stability of the source temperature.
2) Uniformity to which the stable temperature is known.
3) Emissivity of the black body.

Designed diagram of EDIR-500 is given below.

IMPORTANT INSTRUCTION FOR OPTIMUM PERFORMANCE

1) Use 5 Amp glass fuse as supplied with instrument.
2) 3 Pin Plug and Power cable used should have minimum 10 Amp capacity.
3) Cooling fan at the back is on .This is required to cool the electronics. Ensure the air passage is not blocked

SAFETY MEASURES & PRECAUTIONS

A 5 Amp Glass fuse is used in the supply line to prevent any problem due to failure of heating element

- In case of fuse being damaged frequently kindly consult factory.

In the event of SSR failure temperature gets run away above set value. If it cross the set point by more

- than 50°C. Switch off the power immediately and consult factory.

Do not temper wiring as it may be safety hazard.

- Do not transport/ ship/ move the product when it is hot.

Do not bring IR thermometers too close(whithin range of 20mm) from the black body

While installing the product always keep air passage open at the back side of instrument fo proper heat ventilation.

- Never touch the black flat screen by bare hands, wet cloth, sharp pointed tools, any scretch/mark would permanently change the emissivity of the black body.
- Always clean the black body and its front screen by clean air blower.

TROUBLE SHOOTING

1) Calibrator is not reaching set value.
   Check mains for full voltage.

2) Calibrator temperature is running over.
   Check terminal 1 &2 of SSR for getting short If it is short replace it/ Consult factory.
   Check for correct polarity in your mains plug. Phase should go through SSR as per design. If phase is not routed thrue SSR It may not control the temperature.
3) Calibrator is not not getting on.
   Check mains.
   Check fuse.
   Check tightness of all terminals on controller & main terminal strip.
4) Calibrator temperature not getting stable.
   Check fan at the back cover it should be running.
   Need turning off/On controller.

WARRANTY CERTIFICATE

This is to certify that, Infrard flat plate/Black body temperature Calibrator Model EDIR-500 having Sr. No._____ Date_____is properly Tested for workmanship.

We Certify our Calibrator for satisfactory performance for the period of one year from the date of
supply against any manufacturing defect.

Name:
Date:
Signature

CHECK LIST

1) Is Instrument working properly .....(Yes/No)
2) Is power chord available? .....(Yes/No)
3) Is Carry bag available(Optional)if ordered saparetly ? ..(Yes/No)
4) Is all factory setting parameters of Instrument locked? .....(Yes/No)

Name:
Date:
Signature

CALIBRATION CERTIFICATE

Certificate No. : _____

Date : _____

Model No. : _____

Temperature Range : _____

Reading On Calibrator	Reading on Master

Calibrated By
Name:
Date:
Signature: