SUREHEAT 36,000

072768, 072769, 072771, 072772, 072773, 072774, 072775, 072776, 072777, 072778, 072779, 072781

REPLACEMENT ELEMENTS:
072795, 072796, 072797, 072798, 072799, 072801, 072802, 072803, 072804, 072805, 072806, 072807

OVER TEMPERATURE CIRCUIT:
072808

⇒ **FOR SAFETY AND LONG HEATER LIFE, CAREFULLY READ THIS MANUAL BEFORE USE.**

Description

Compact, and safe heater for heating air or inert gas to 1400°F. The SureHeat 36,000 is available in wattages from 6kW to 36kW, and can be use with compressed air or a regenerative blower. The SureHeat 36,000 is designed for closed-loop temperature control, with a solid state relay or phase angle fired SCR power control. Sensors inside the heater sense both element temperature and inlet air temperature limit heater voltage and prevent element burnout if airflow is suddenly reduced. With this system, full power may safely be applied to the system with zero airflow. If operated correctly, the heater element will operate continuously for 5000 hours or longer.

Specifications

- Max. Static Pressure: 10 PSI
- Max. Exit Air Temp: 1400°F
- Max. Inlet Air Temp: 150°F
- Exit Connection: 1-1/2" NPT
- Inlet Connection: 1-1/4" NPT
- Control: Closed Loop: 4 to 20mADC or pulsed DC (3-32V, etc.).
- Over-Temp Circuit: Dual Input Limit Card mounted on a 6" x 3.15" x 1.6" deep snap-track. Mount track to control cabinet using two #8 mounting screws drilled 5.63" O.C.

System (Heater + Over-Temp)	kW	Max. Volts	Max. Amp Draw	Replacement Element P/N
072768	6	240-1 phase	25.0	072795
072769	6	240-3 phase	14.5	072796
072771	6	380 -3 phase	9.1	072797
072772	6	480-3 phase	7.2	072798
072773	10	240-1 phase	41.7	072799
072774	10	240-3 phase	24.1	072801
072775	10	380 -3 phase	15.2	072802
072776	10	480-3 phase	12.0	072803
072777	18	380 -3 phase	27.4	072804
072778	18	480-3 phase	21.7	072805
072779	36	380 -3 phase	54.8	072806
072781	36	480-3 phase	43.4	072807

Safety

- **SHOCK HAZARD** Only qualified individuals should install this heater and related controls. Follow all applicable electrical codes and use proper wiring.

- ***WARNING! Sensors are at or near line voltage. Use Teflon jacketed, Teflon insulated "K" thermocouple wire to connect heater sensors to the over-temperature board.***

- **BURN/FIRE/EXPLOSION HAZARD** Do not use with or near explosive or reactive gases. Avoid contact with the side, or exposure to the exit-end, during or soon after operation. DO NOT USE NEAR VOLATILE OR COMBUSTIBLE MATERIALS.

Precautions

- Use filtered air. Avoid grease, oil, or oil vapors, corrosive or reactive gases that will damage heater.
- Use exposed junction type "K" thermocouple within one inch of the heater exit for good control.

Installation and Wiring

See attached drawings.

WARNING! Sensors are at or near line voltage. Use Teflon jacketed, Teflon insulated "K" thermocouple wire to connect heater sensors to the over-temperature board.

1. Be sure heater is securely mounted.
2. Follow all applicable electrical codes when mounting and wiring heater and control components.

Operation

1. Turn on air and set pressure or flow to desired operating level.
2. Turn on power to the over-temperature board.
3. Turn on power to the power controller.
4. Turn on power to the temperature controller.
5. Set desired temperature on temperature controller.

During operation, with steady-state airflow, the exit temperature should not vary more than a few degrees from set point. Although the heater will not burn out with zero airflow, if the heater is operated in a vertical downward position and an airflow of 100 SCFH or below is run through the heater, the inlet temperature of the heater will exceed 150°F and the Over-temperature board will begin to limit power to the heater.

To Shut Down:

1. Turn off power to the temperature controller and the power controller.
2. Allow air to continue to flow for a minimum of 1 minute or until exit air temperature is 150°C or less for safety. Continue airflow longer if hot equipment components present any potential hazard to personnel.
3. Turn off air to the system.

Replacing Elements

Before replacing the element assembly, determine the cause of the element failure. Prior to powering the system back up, make certain that the entire system is operating properly. Possible causes of element failure are:

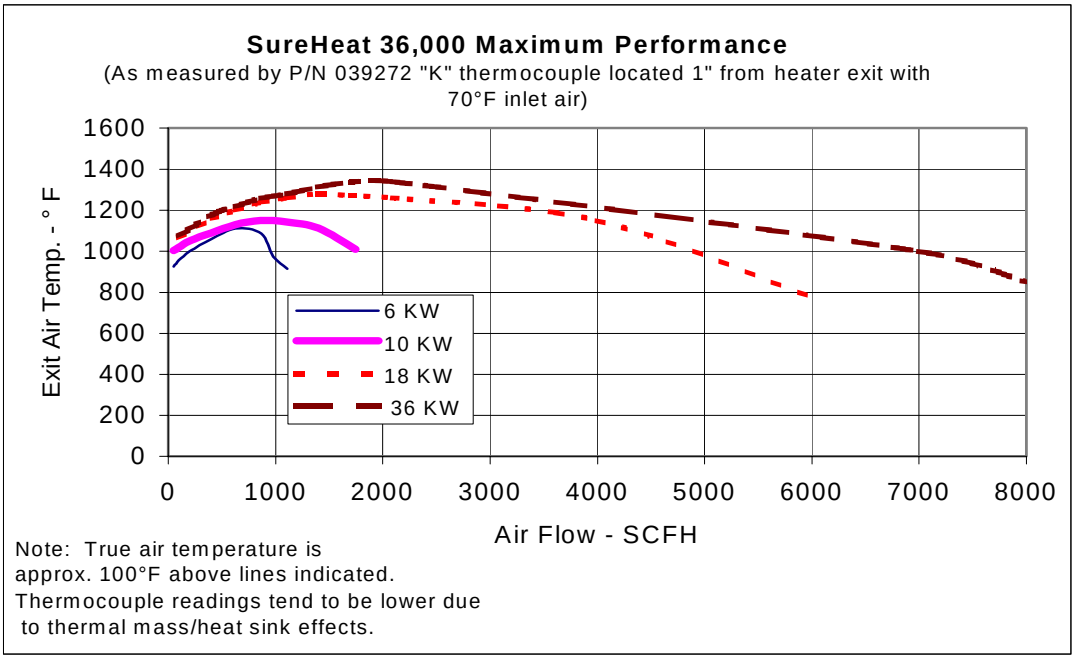
1. Normal end of Life
2. Failure in Control System
3. Mechanical Damage to System

REPLACEMENT PROCEDURE

1. Turn off power to the system. Follow lock-out/tag-out procedures.
2. Unscrew the 3 external housing screws and remove the stainless heater housing.
3. Unplug element from its socket and plug new element into the socket.
4. Slide the stainless heater housing back over the element and secure housing with the 3 external housing screws.

Performance Curves

The following curves show the maximum temperature performance of the SureHeat 36,000 as measured by P/N 039272 thermocouple mounted in P/N 065832 thermocouple adapter. Use of other temperature measuring devices or varying the distance of the measurement may cause different temperature readings. The heaters will not generate temperatures greater than indicated on the graph in order to maintain operating life in excess of 5000 hours.



Warranty

OSRAM SYLVANIA warrants that all products to be delivered hereunder will be free from defects in material and workmanship at the time of delivery. OSRAM SYLVANIA's obligation under this warranty shall be limited to (at its option) repairing, replacing, or granting a credit at the prices invoiced at the time of shipment for any of said products. This warranty shall not apply to any such products which shall have been repaired or altered, except by OSRAM SYLVANIA, or which shall have been subjected. OSRAM SYLVANIA shall be liable under this warranty only if (A) OSRAM SYLVANIA receives notice of the alleged defect within sixty (60) days after the date of shipment; (B) the adjustment procedure hereinafter provided is followed, and (C) such products are, to OSRAM SYLVANIA's satisfaction, determined to be defective.

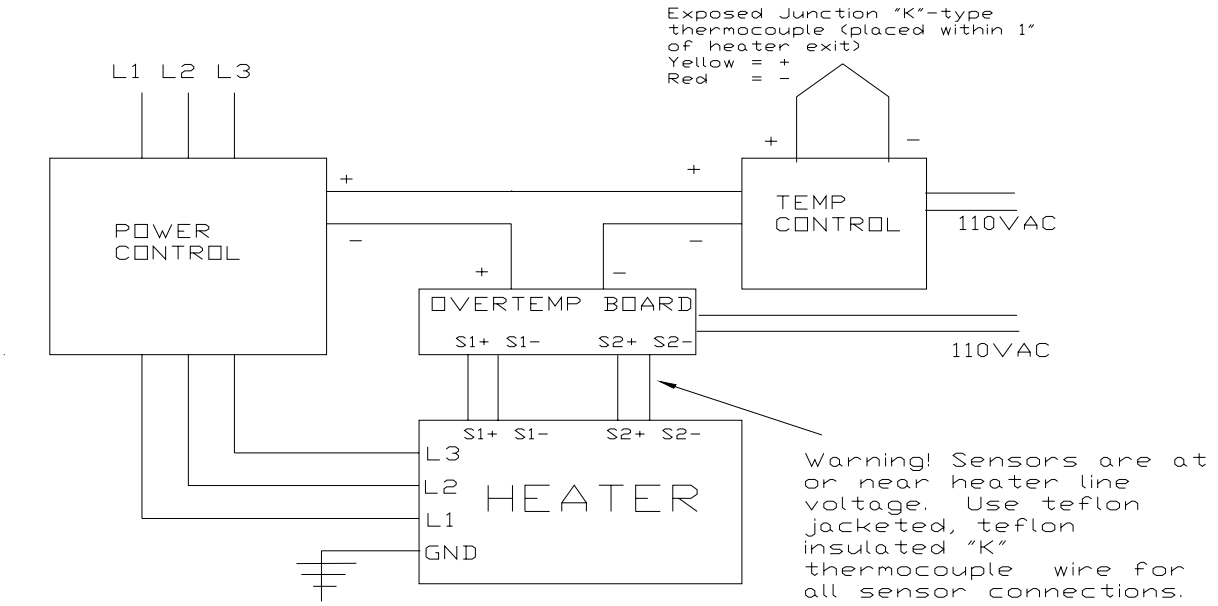
THE WARRANTY SET FORTH IN THE PRECEDING PARAGRAPH IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR OF MERCHANTABILITY.
The information contained in this manual is based on data considered to be true and accurate. Reasonable precautions for accuracy has been taken in the preparation of this manual, however OSRAM SYLVANIA assumes no responsibility for any omissions or errors, nor assumes any liability for damages that may result from the use of the product in accordance with the information contained in this manual.

Please direct all warranty/repair requests or inquiries to the place of purchase, and provide the following information, in writing:

(A) Order number under which products were shipped
(B) Model/Serial Number of product
(C) Reason for rejection

PRODUCTS CANNOT BE RETURNED TO OSRAM SYLVANIA WITHOUT AUTHORIZATION.
Replacement, repair, or credit for products found to be defective will be made by the place of purchase. All products found to be not defective will be returned to the Buyer; transportation charges collect or stored at Buyers expense.

WIRING DIAGRAM



NOTES:

1) For single phase, use L1 and L2 only.

2) If the yellow LED on the limiter blinks off, the over-temp board is limiting heater power.

3) The Green LED's indicate the overtemp board is turned on.

MOUNTING DIMENSIONS