

Airpax Series 6600 Thermostat

The Airpax Series 6600 is a miniature bimetallic snap acting thermostat which provides accurate and reliable sensing and switching in a single device. It provides fast, positive responses and excellent repeatability with lamp switching capability at 48 VDC over its operating temperature range of 40°C to 120°C (104°F to 248°F). The temperature is pre-set at the factory and non-adjustable in the field.

The single-pole/single-throw switch assembly is operated by a bimetallic element with a positive snap action available in either normally closed, open on rising temperature or normally open, close on rising temperature configurations.

The Series 6600 Thermostat has been designed around the standard 8-pin N8A Dual Inline Package, making it ideally suited for use on printed circuit boards. Its size and shape conserves space on crowded P.C. boards and can be installed using auto-insertion equipment. The device is sealed to withstand wave soldering and board washing operations.

Typical uses include turning on an indicator light, sounding an audible alarm, switching on a control circuit to send a message to a display screen, or even switching a circuit to shut down a system upon sensing over temperature.

Applications include computers and computer peripherals, aircraft, automotive, and test equipment.

The 6600 Thermostat product is temperature tested in a computer controlled automated test equipment air-oven. Due to the ideal conditions under which it is tested, independent customer testing may be necessary to ensure that the correct calibration is utilized in the application.

It is the customer's responsibility to determine whether the product is proper for customer's use and application.



AIRPAX®

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SPECIFICATIONS

- **Contact Resistance:** 50 Milliohms max.
- **Contact Ratings:** (see *Special Requirements)
Approved per VDE 0631/12.83

Cycles	Voltage	Amps (resistive)
30,000	48 VDC Test, Class I	1 A
30,000	120 VAC Test, Class I	1 A
100,000	5 VDC Test, Class II	0.02 A

 CSA Certified LR2556I and UL Recognized E36687

Cycles	Voltage	Amps (resistive)
30,000	48 VDC	1 A
30,000	120 VAC	1 A
100,000	5 VDC	0.001 A
100,000	5 VDC	0.02 A
- **Ambient Temperature Range:** -55°C to 160°C
- **Contact Operations:** Either open on rise or close on rise
- **Operating Temperature Range:**
40°C (104°F) to 120°C (248°F)
- **Standard Operating Temperature Tolerance:**
±5°C (±9°F) Nominal operating temperature settings
in 5°C (9°F) increments
- **US Patent No:** 4,620,175
- **Short Term Exposure Limit:** 260°C (500°F), 10 sec.
- **Long Term Exposure Limit:** -55°C (-67°F) to 160°C (320°F)
- **Dielectric Strength:** 1480 VAC 60Hz, 1 second
terminals to case
- **Insulation Resistance:** 100 Megohms at 500 VDC
- **Contact Bounce - make:** 3 ms max.
- **Weight:** Approximately 0.45 grams

- **Seal:** Epoxy sealed for wave soldering and cleaning.
Moisture proof per Airpax Spec. S-722 (unit will not leak while submerged in 9" of water for a minimum of two minutes).
- **Chemical Resistance:** Both the base and the unit are resistant to water, salt, alcohol, ammonia, trichlorethane, and most other organic solvents.
- **Vibration:** Per Mil-Std-202, Method 204D,
Test Condition D, 10-2,000 Hz.
- **Shock:** Per Mil-Std-202, Method 213, Test Condition C,
100 G's, 6 milliseconds, ½ sine wave.
- **Resistance to Soldering Heat:**
Per Mil-Std-202F, Method 210A, Test Condition E.
- **Mechanical Life:** 1KK operations

MATERIALS

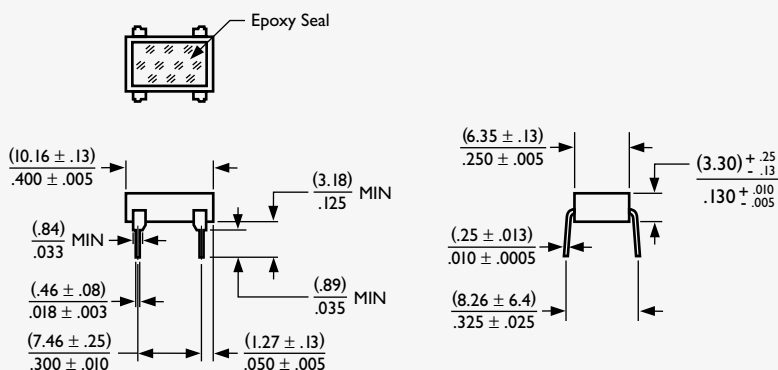
- **Seal:** High temperature epoxy
- **Base:** PPS (Polyphenylene Sulfide), 94 VO rated
- **Terminals:** 65% Copper, 18% Nickel
- **Contacts:** Gold-plated or overlay, silver cross bar
- **Bracket:** Nickel-plated copper or high pressure laminated plastic

***Special Requirements:** Please consult factory for special part number if VDE, surface mount and/or tape and reel is required.
(Note: Tape and reel available with surface mount only)

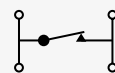
Temperature Calibration is checked at Airpax with precision test equipment traceable to the US National Institute of Standards and Technology and Proven Methods. Because customer checking methods may differ, a typical variance allowed for correlation is ±2°F (±1.1°C).

Airpax 6600 Series Thermostats

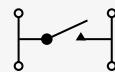
Standard 8 PIN D.I.P. Configuration*



PIN Number Identification Does Not Appear on Part

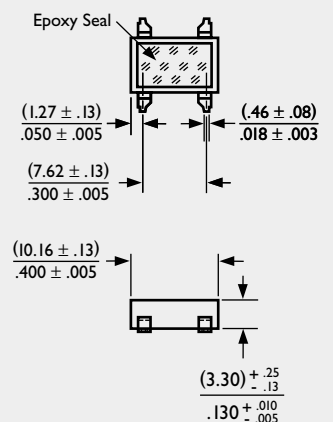


Schematic For
Open on Rise
Operation



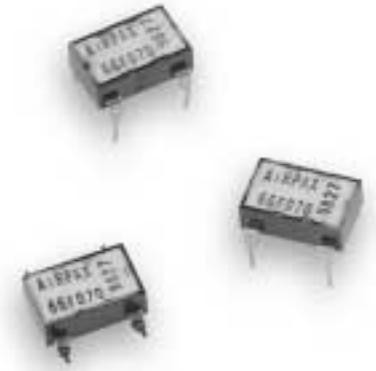
Schematic For
Close on Rise
Operation

Surface Mount Configuration*



6600 SERIES STANDARD TEMPERATURE CALIBRATIONS

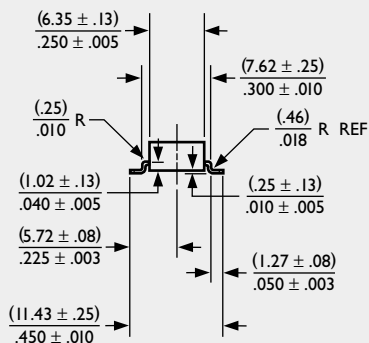
OPERATE ($\pm 5^{\circ}\text{C}$)	RESET (MIN $^{\circ}\text{C}$)	DIFFERENTIAL (MIN $^{\circ}\text{C}$)
40	20	4
45	20	4
50	30	4
55	30	4
60	40	4
65	40	4
70	50	4
75	50	4
80	55	6
85	55	6
90	60	6
95	60	6
100	70	6
105	70	6
110	80	6
115	85	6
120	90	9



HOW TO USE THIS CHART

Each Thermostat Part Number consists of functional “building blocks” to enable the user to specify clearly and precisely the desired characteristics in each category. Select the proper code in each category, then transfer it to the box indicated. Unless a special requirement is indicated, the Part Number will be complete when the proper temperature is selected. If you have a special requirement, please call us for a factory assigned number to complete the Part Number.

Example: A 66F060 thermostat will close (make contact) on a rising temperature from 55°C to 65°C and will reset (break contact) on a falling temperature no less than 4°C lower than the actual close temperature and no lower than 40°C actual temperature.



Contact Operation

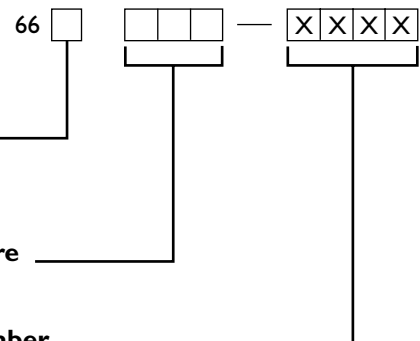
F = Fan (Close on Rise)
L = Limit (Open on Rise)

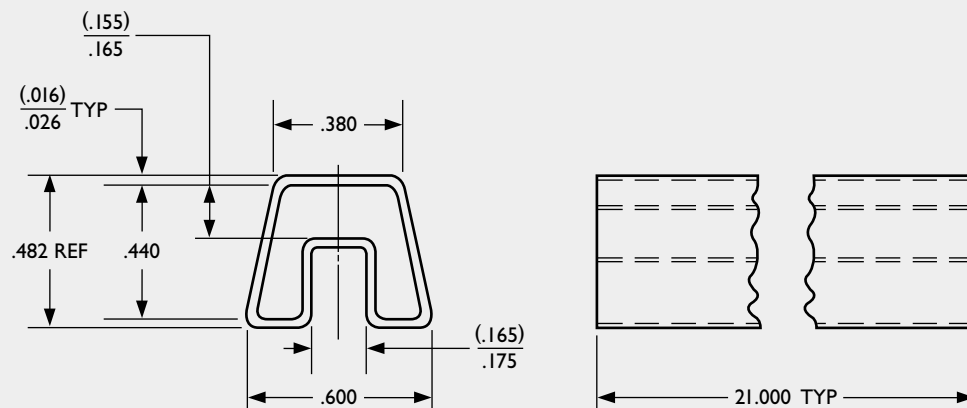
Operating Temperature

in $^{\circ}\text{C}$ (from table, above)

Factory Assigned Number

For Special Requirements*





Packaging: (standard)

All samples and production orders will be shipped in plastic, industry standard DIP tubes.

This information is subject to change without notice.

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