The Airpax Series 6700 is a miniature bimetallic snap acting thermostat which provides accurate and reliable sensing and switching in a single device. Primarily developed for thermal management applications on power supplies, the Series 6700 is also ideally suited for use on crowded P.C. boards. It provides fast, positive response and excellent repeatability with 1 amp switching capability at 48 VDC over its operating temperature range of 40°C to 130°C (104°F to 266°F). The operating temperature is preset at the factory and is non-adjustable in the field.

The single pole/single throw switch assembly features a bimetallic element that is rated 100,000 cycles at 5 VDC 20mA resistive load. This unit features a positive snap action, available in either normally closed, open on rising temperature or normally open, close on rising temperature.

The 6700 Thermostat dimensionally conforms to the international product package standard Y220/T0220. Thus, the 6700 may be automatically placed and soldered onto P.C. boards with high speed automated equipment, eliminating the need for the expensive hand placement and termination required today for most power supply thermostats.

The nickel-plated copper mounting bracket allows this device to be directly mounted to the heat sink to sense an over-temperature condition caused by other components mounted close by or insufficient cooling due to external conditions.

A plastic mounting bracket is utilized when VDE approval is required.

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

- **Contact Resistance:** 50 Milliohms max. (before and after rated life)
- **Contact Ratings:**
  - 30,000: 48 VDC 1
  - 30,000: 120 VAC 1
  - 100,000: 5 VDC 0.020
  - 100,000: 5 VDC 0.001
- **Contact Operations:** Either open on rise or close on rise
- **Operating Temperature Range:** 40°C (104°F) to 130°C (266°F)
- **Standard Operating Temperature Tolerance:** ±5°C (±9°F) Nominal operating temperature settings in 5°C (9°F) increments
- **US Patent No:** 4,795,997
- **Short Term Exposure Limit:** 180°C (356°F) for 10 sec
- **Long Term Exposure Limit:** 148°C (298°F) to 160°C (320°F)
- **Dielectric Strength:** 1800 VAC 60Hz, 1 second terminals to case for plastic bracket. 2000 VAC 60Hz, 1 second terminals to case for nickel-plated copper bracket.
- **Insulation Resistance:** 100 Megohms at 500 VDC
- **Contact Operations:**
  - Either open on rise or close on rise
  - Contact Bounce - make: 3 ms max.
  - Weight: Approximately 0.5 grams

### AIRPAX 6700 SERIES THERMOSTATS

- **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

### MATERIALS

- **Seal:** Epoxy sealed for wave soldering and cleaning. Moisture proof per Airpax Spec. S-722 (unit will not leak while submerged in 9°F of water for a minimum of two minutes).
- **Vibration:** Per Mil-Std-202, Method 204D1, Test Condition D, 10-2,000 Hz
- **Shock:** Per Mil-Std-202, Method 213, Test Condition C, 100 G’s, 6 milliseconds, 1/2 sine wave.
- **Chemical Resistance:** Unit is resistant to water, salt, alcohol, ammonia, trichloromethane, and most other organic solvents.
- **Solderability:** Terminal material is selectively stripped with 60/40 solder for improved solderability.

### 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 Airpax for a factory assigned number to complete the Part Number.

**Example:** A 67F060 thermostat will close (make contact) on a rising temperature from 45°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.

### 6700 SERIES STANDARD TEMPERATURE CALIBRATIONS

<table>
<thead>
<tr>
<th>OPERATE (°C)</th>
<th>RESET (MIN °C)</th>
<th>DIFFERENTIAL (MIN °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>45</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>50</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>55</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>60</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>65</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>70</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>75</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>80</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>85</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>90</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>95</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>100</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>105</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>110</td>
<td>80</td>
<td>6</td>
</tr>
<tr>
<td>115</td>
<td>80</td>
<td>6</td>
</tr>
<tr>
<td>120</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>125</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>130</td>
<td>90</td>
<td>9</td>
</tr>
</tbody>
</table>

### 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 Airpax for a factory assigned number to complete the Part Number.

**Example:** A 67F060 thermostat will close (make contact) on a rising temperature from 45°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.

### 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 Airpax for a factory assigned number to complete the Part Number.

**Example:** A 67F060 thermostat will close (make contact) on a rising temperature from 45°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.

### 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 Airpax for a factory assigned number to complete the Part Number.

**Example:** A 67F060 thermostat will close (make contact) on a rising temperature from 45°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.
Airpax 6700 Series Thermostats

SPECIFICATIONS

- **Contact Resistance:** 50 Megohms max. (before and after rated life)
- **Contact Ratings:**
  - Cycles Voltage Amps (resistive)
  - 30,000 48 VDC 1
  - 30,000 100 VDC 1
  - 100,000 5 VDC 0.020
  - 100,000 5 VDC 0.001
- **Contact Operations:** Either open on rise or close on rise
- **Operating Temperature Range:** 40°C (104°F) to 130°C (266°F)
- **Standard Operating Temperature Tolerance:** ±5°C (±9°F) Nominal operating temperature settings in 5°C (9°F) increments
- **US Patent No:** 4,795,997
- **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:** 1,480 VAC 60Hz, 1 second terminals to case for nickel-plated copper bracket. 2000 VAC 60Hz, 1 second terminals to case for plastic bracket.
- **Insulation Resistance:** 100 Megohms at 500 VDC
- **Contact Bounce - make:** 3 ms max.
- **Weight:** Approximately 0.5 grams

**MATERIALS**

- **Seal:** High temperature epoxy
- **Base:** PPS (Polyphenylene Sulfide), 94V0 rated
- **Terminals:** 65% Copper, 18% Nickel
- **Contacts:** Gold-plated or overlay, Silver cross bar
- **Brackets:** Nickel-plated copper or high pressure laminated plastic

**HOW TO USE THIS CHART**

- **Operate (°C)**
- **Reset (MIN °C)**
- **Differential (MIN °C)**

### Basic Product Series

- **Contact Operation**
  - **F** = Fan (Close on Rise)
  - **L** = Limit (Open on Rise)

- **Operating Temperature**
  - in °C (from table, above)

- **Mounting Bracket Designation:**
  - “Blank” for Nickel-Plated Copper Bracket
  - “P” for Plastic Mounting Bracket (VDE approved)

- **Factory Assigned Number**
  - For Special Requirements

### Schematic at 20°C

- **At 20°C (Open on Rise)**
  - (0.08 ± 0.005)
  - (400 ± 0.005)
  - (5.61 ± 0.03)

- **At 20°C (Close on Rise)**
  - (2.79 ± 0.005)
  - (10.16 ± 0.005)

### 6700 SERIES STANDARD TEMPERATURE CALIBRATIONS

<table>
<thead>
<tr>
<th>OPERATE (°C)</th>
<th>RESET (MIN °C)</th>
<th>DIFFERENTIAL (MIN °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>45</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>50</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>55</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>60</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>65</td>
<td>40</td>
<td>4</td>
</tr>
<tr>
<td>70</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>75</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>80</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>85</td>
<td>55</td>
<td>6</td>
</tr>
<tr>
<td>90</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>95</td>
<td>60</td>
<td>6</td>
</tr>
<tr>
<td>100</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>105</td>
<td>70</td>
<td>6</td>
</tr>
<tr>
<td>110</td>
<td>80</td>
<td>6</td>
</tr>
<tr>
<td>115</td>
<td>80</td>
<td>6</td>
</tr>
<tr>
<td>120</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>125</td>
<td>85</td>
<td>9</td>
</tr>
<tr>
<td>130</td>
<td>90</td>
<td>9</td>
</tr>
</tbody>
</table>

The mounting bracket designation and the 4 digit manufacturing number are used for ordering special features and may not appear as part of the marking on the thermostat.

Temperature set point calibration is checked at Airpax with precision test equipment and proven methods. Because customer checking methods may differ, a typical variance allowed for correlation is ±1°C.

**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 Airpax for a factory assigned number to complete the Part Number.

**Example:** A 67F060 thermostat will close (make contact) on a rising temperature from 53°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.
The Airpax Series 6700 is a miniature bimetallic snap acting thermostat which provides accurate and reliable sensing and switching in a single device. Primarily developed for thermal management applications on power supplies, the Series 6700 is also ideally suited for use on crowded P.C. boards. It provides fast, positive response and excellent repeatability with 1 amp switching capability at 48 VDC over its operating temperature range of 40°C to 130°C (104°F to 266°F). The operating temperature is preset at the factory and is non-adjustable in the field.

The single pole/single throw switch assembly features a bimetallic element that is rated 100,000 cycles at 5 VDC 20mA resistive load. This unit features a positive snap action, available in either normally closed, open on rising temperature or normally open, close on rising temperature.

The 6700 Thermostat dimensionally conforms to the international product package standard Y220/T0220. Thus, the 6700 may be automatically placed and soldered onto P.C. boards with high speed automated equipment, eliminating the need for the expensive hand placement and termination required today for most power supply thermostats.

The nickel-plated copper mounting bracket allows this device to be directly mounted to the heat sink to sense an over-temperature condition caused by other components mounted close by or insufficient cooling due to external conditions.

A plastic mounting bracket is utilized when VDE approval is required.

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