

AIRPAX® | 6700 Series

TO-220 BIMETAL DISC THERMOSTAT

FEATURES

- RoHS compliant per EU directive 2002 / 95 / EC
- TO-220 / Y-220 international electronic package standard
- Ideal for surface and air sensing on PC boards and heat sinks
- VDE approved with "P" bracket option
- Gold-plated contacts
- Up to 30,000 life cycles @ max standard amperage
- Up to 100,000 life cycles @ max gold contact amperage

DESCRIPTION

The Airpax™ 6700 series is a RoHS compliant, positive snap action, single pole / single throw, sub-miniature bimetallic thermostat which provides accurate and reliable sensing and switching in a single device.

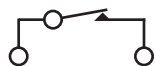
The 6700 series thermostat dimensionally conforms to the international product package standard Y220 / TO220. Thus, the 6700 may be automatically placed and soldered onto PC boards with high speed automated equipment, eliminating the need for the expensive hand placement and termination required today for most power supply thermostats.

The 6700 provides fast, positive response with excellent repeatability. The thermostat has a switch capability of up to 1 amp for 48 VDC or 120 VAC for 30,000 cycles, and achieves low-level switching down to 0.001A to 0.020A at 5 VDC for 100,000 cycles. Temperature is pre-set at the factory and is non-adjustable in the field.

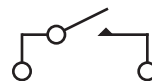
Thermal conductivity is mainly through the terminals and the mounting bracket making the unit ideal for both surface mount and ambient air sensing. The nickel-plated copper mounting bracket comes standard, or you can utilize the laminated plastic mounting bracket for increased dielectric strength and VDE approval.

Primarily developed for thermal management applications on power supplies, the Airpax™ 6700 series is also ideally suited for use on crowded PC boards. Typical uses include turning on an indicator light, sounding an audible alarm, switch 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, medical devices and test equipment.

OPERATION SCHEMATICS



Schematic for
Open on Rise
Operation



Schematic for
Close on Rise
Operation

SPECIFICATIONS

Contact Resistance	50 milliohms max (before and after rated life)		
Contact Ratings	Cycles	Voltage	Amps (resistive)
	20,000	48 VDC	0.5
	100,000	5 VDC	0.001 (gold)
Contact Operations	Either close on rise (make) or open on rise (break)		
Operating Temperature	40°C to 130°C (104°F to 266°F)		
Temperature Tolerance	Standard of ±5°C (±9°F) with nominal operating temperature settings in 5°C increments		
Short Term / Long Term Exposure Limit	Short = 260°C (500°F), 10 second duration		Long = -55°C to 160°C (-67°F to 320°F)
Dielectric Strength	Nickel-plated copper bracket has 1480 VAC 60Hz, 1 second duration terminals to case. Plastic bracket has 2000 VAC 60Hz, 1 second duration terminals to case.		
Insulation Resistance	100 Mohms at 500 VDC		
Contact Bounce	3 milliseconds max (make)		
Vibration	Per Mil-Std-202, method 204D, test condition D, 10 to 2,000 Hz		
Shock	Per Mil-Std-202, method 213, test condition C, 100 G's for 6 millisecond duration, ½ sine wave		
Seal	High temperature epoxy sealed for wave soldering and cleaning, moisture proof per Sensata specification S-722 (unit will not leak while submerged in 9" of water for a minimum of two minutes)		
Base Material	PPS (Polyphenylene Sulfide), 94 VO rated		
Terminal Material	65% Copper, 18% Nickel		
Contact Material	Gold-plated or overlay, silver crossbar		
Mounting Bracket Material	Nickel-plated copper (standard) or high pressure laminated plastic ("P" mounting bracket option)		
Chemical Resistance	Unit is resistance to water, salt, alcohol, ammonia, trichlorethane and most other organic solvents		
Solderability	Terminal material is selectively striped with lead-free solder for improved solderability.		
Soldering Heat Resistance	Per Mil-Std-202G, method 210F, test condition C & K, test condition K validated at 260°C for 25 seconds		
Weight	Approximately 0.5 grams		
Agency Approvals	cRUus recognized E36687 VDE approval 0631/12.83 RoHS Compliant per EU Directive 2002/95/EC		