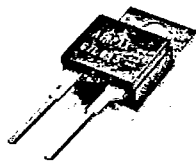


6700 Series Thermostats

6700 P.C. Board Thermostat



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 110°C (104°F to 230°F). The operating temperature is pre-set 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 20 mA resistive or in excess of 1,000,000 operations mechanically. 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.

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:

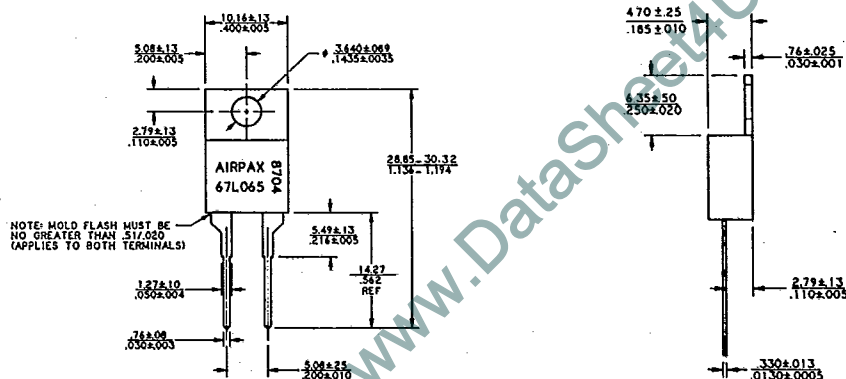
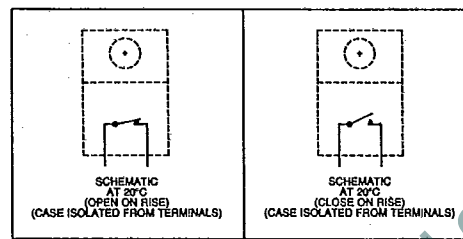
Cycles	Voltage	Amps (Resistive)
30,000	48 VDC	1
30,000	120 VAC	1
100,000	5 VDC	.020
100,000	5 VDC	.001

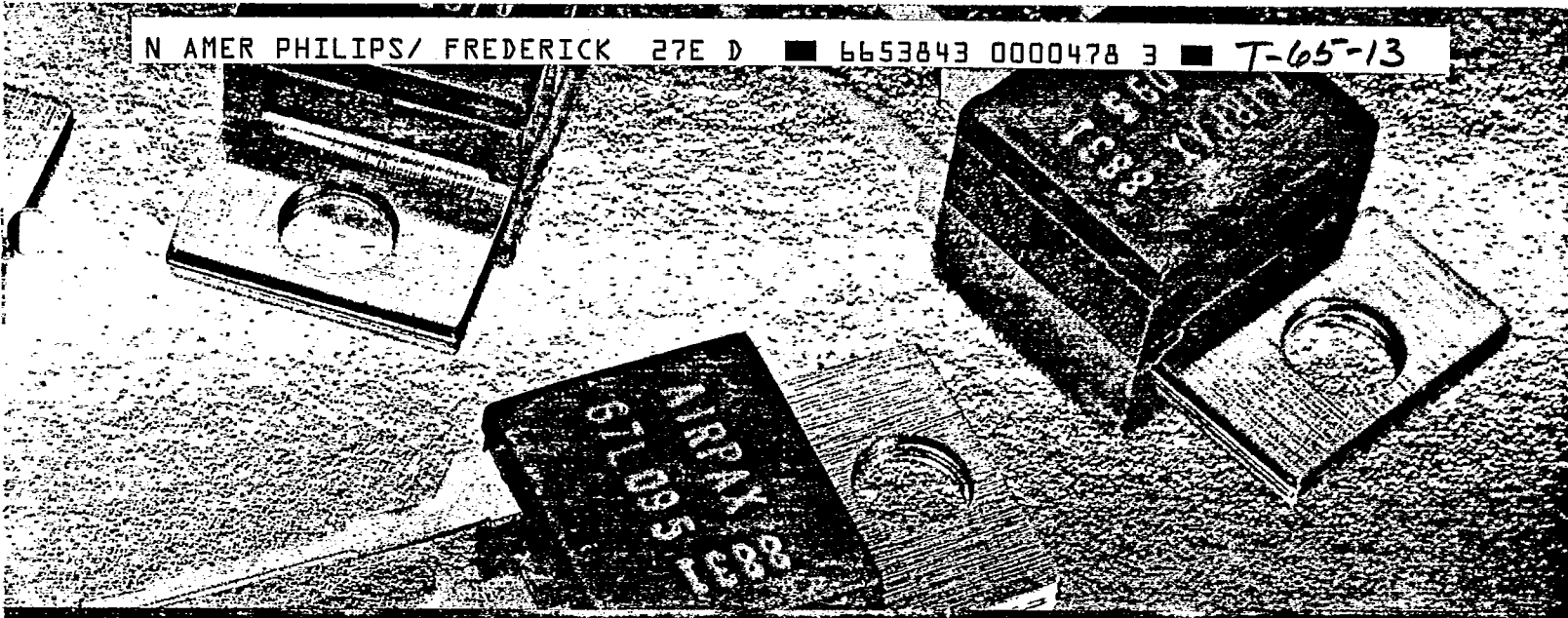
Contact Operations: Either open on rise or close on rise

Operating Temperature Range: 40°C (104°F) to 110°C (230°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





6700 Series Thermostats

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 60 Hz,
1 second terminals to case

Insulation Resistance: 100 Megohms
at 500 VDC

Contact Bounce - make: 3 ms max.

Weight: Approximately 0.5 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).

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.

Humidity: Moisture resistant per
Mil-Std-202F, Method 106E.

Chemical Resistance: Unit is resistant
to water, salt, alcohol, ammonia,
trichlorethane, and most other organic
solvents.

Solderability: Terminal material is
selectively striped with 60/40 solder for
improved solderability.

Resistance to Soldering Heat:
Per Mil-Std-202F, Method 210A,
Test Condition E.

Mechanical Life: 1,000,000 operations.

UL & CSA File Numbers:
UL Recognized E36687
CSA Certified LR25561

Materials:

Seal: High temperature epoxy

Base: PPS (Polyphenylene Sulfide),
94 VO rated

Terminals: 65% Copper, 18% Nickel

Contacts: Gold-plated Silver cross bar

Bracket: Nickel-plated copper

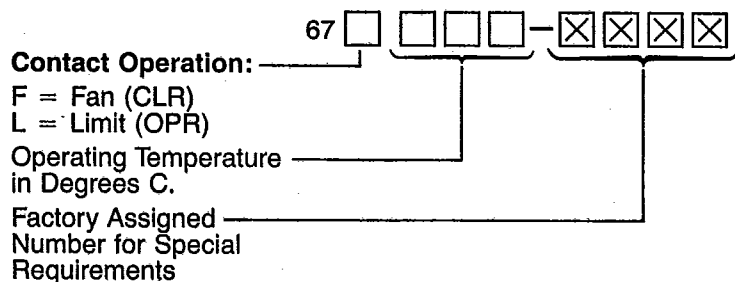
6700 SERIES STANDARD CALIBRATIONS

OPERATE (±5°C)	RESET (MIN °C)	DIFFERENTIAL (MIN °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

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 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.



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 degree C.

TEMPERATURE CONVERSION TABLE

If center column value is °F, the °C equivalent is to the left. If center column value is °C, the °F equivalent is to the right.

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F							
-34.44	-30	-22	15.56	60	140	65.56	150	302	115.56	240	464	165.56	330	628	215.56	420	788	257.22	495	923
-33.33	-29	-20.2	16.11	61	141.8	66.11	151	303.8	116.11	241	465.8	166.11	331	627.8	216.11	421	789.8	258.33	496	924.8
-32.22	-28	-19.4	16.67	62	142.8	66.67	152	304.8	116.67	242	466.8	166.67	332	626.8	216.67	422	791.8	259.44	497	926.8
-31.11	-27	-18.6	17.22	63	143.8	67.22	153	305.8	117.22	243	467.8	167.22	333	625.8	217.22	423	793.8	260.56	498	928.8
-30.00	-26	-17.8	17.78	64	144.8	67.78	154	306.8	117.78	244	468.8	167.78	334	624.8	217.78	424	795.8	261.67	499	930.8
-28.89	-25	-17.0	18.33	65	145.8	68.33	155	307.8	118.33	245	469.8	168.33	335	623.8	218.33	425	797.8	262.78	500	932.8
-27.78	-24	-16.2	18.89	66	146.8	68.89	156	308.8	118.89	246	470.8	168.89	336	622.8	218.89	426	799.8	263.89	501	934.8
-26.67	-23	-15.4	19.44	67	147.8	69.44	157	309.8	119.44	247	471.8	169.44	337	621.8	219.44	427	801.8	265.00	502	936.8
-25.56	-22	-14.6	19.99	68	148.8	69.99	158	310.8	119.99	248	472.8	169.99	338	620.8	220.00	428	803.8	266.11	503	938.8
-24.44	-21	-13.8	20.56	69	149.8	70.56	159	311.8	120.56	249	473.8	170.56	339	619.8	220.56	429	805.8	267.22	504	940.8
-23.33	-20	-13.0	21.11	70	150.8	71.11	160	312.8	121.11	250	474.8	171.11	340	618.8	221.11	430	807.8	268.33	505	942.8
-22.22	-19	-12.2	21.67	71	151.8	71.67	161	313.8	121.67	251	475.8	171.67	341	617.8	221.67	431	809.8	269.44	506	944.8
-21.11	-18	-11.4	22.22	72	152.8	72.22	162	314.8	122.22	252	476.8	172.22	342	616.8	222.22	432	811.8	270.56	507	946.8
-20.00	-17	-10.6	22.78	73	153.8	72.78	163	315.8	122.78	253	477.8	172.78	343	615.8	222.78	433	813.8	271.67	508	948.8
-18.89	-16	-9.8	23.33	74	154.8	73.33	164	316.8	123.33	254	478.8	173.33	344	614.8	223.33	434	815.8	272.78	509	950.8
-17.78	-15	-9.0	23.89	75	155.8	73.89	165	317.8	123.89	255	479.8	173.89	345	613.8	223.89	435	817.8	273.89	510	952.8
-16.67	-14	-8.2	24.44	76	156.8	74.44	166	318.8	124.44	256	480.8	174.44	346	612.8	224.44	436	819.8	275.00	511	954.8
-15.56	-13	-7.4	25.00	77	157.8	75.00	167	319.8	125.00	257	481.8	175.00	347	611.8	225.00	437	821.8	276.11	512	956.8
-14.44	-12	-6.6	25.56	78	158.8	75.56	168	320.8	125.56	258	482.8	175.56	348	610.8	225.56	438	823.8	277.22	513	958.8
-13.33	-11	-5.8	26.11	79	159.8	76.11	169	321.8	126.11	259	483.8	176.11	349	609.8	226.11	439	825.8	278.33	514	960.8
-12.22	-10	-5.0	26.67	80	160.8	76.67	170	322.8	126.67	260	484.8	176.67	350	608.8	226.67	440	827.8	279.44	515	962.8
-11.11	-9	-4.2	27.22	81	161.8	77.22	171	323.8	127.22	261	485.8	177.22	351	607.8	227.22	441	829.8	280.56	516	964.8
-10.00	-8	-3.4	27.78	82	162.8	77.78	172	324.8	127.78	262	486.8	177.78	352	606.8	227.78	442	831.8	281.67	517	966.8
-9.89	-7	-2.6	28.33	83	163.8	78.33	173	325.8	128.33	263	487.8	178.33	353	605.8	228.33	443	833.8	282.78	518	968.8
-8.78	-6	-1.8	28.89	84	164.8	78.89	174	326.8	128.89	264	488.8	178.89	354	604.8	228.89	444	835.8	283.89	519	970.8
-7.67	-5	-1.0	29.44	85	165.8	79.44	175	327.8	129.44	265	489.8	179.44	355	603.8	229.44	445	837.8	285.00	520	972.8
-6.56	-4	-0.2	30.00	86	166.8	79.99	176	328.8	129.99	266	490.8	179.99	356	602.8	230.00	446	839.8	286.11	521	974.8
-5.44	-3	0.6	30.56	87	167.8	80.56	177	329.8	130.56	267	491.8	180.56	357	601.8	230.56	447	841.8	287.22	522	976.8
-4.33	-2	1.4	31.11	88	168.8	81.11	178	330.8	131.11	268	492.8	181.11	358	600.8	231.11	448	843.8	288.33	523	978.8
-3.22	-1	2.2	31.67	89	169.8	81.67	179	331.8	131.67	269	493.8	181.67	359	599.8	231.67	449	845.8	289.44	524	980.8
-2.11	0	3.0	32.22	90	170.8	82.22	180	332.8	132.22	270	494.8	182.22	360	598.8	232.22	450	847.8	290.56	525	982.8
-1.00	1	3.8	32.78	91	171.8	82.78	181	333.8	132.78	271	495.8	182.78	361	597.8	232.78	451	849.8	291.67	526	984.8
0.11	2	4.6	33.33	92	172.8	83.33	182	334.8	133.33	272	496.8	183.33	362	596.8	233.33	452	851.8	292.78	527	986.8
1.22	3	5.4	33.89	93	173.8	83.89	183	335.8	133.89	273	497.8	183.89	363	595.8	233.89	453	853.8	293.89	528	988.8
2.33	4	6.2	34.44	94	174.8	84.44	184	336.8	134.44	274	498.8	184.44	364	594.8	234.44	454	855.8	295.00	529	990.8
3.44	5	7.0	35.00	95	203	85	185	365	135	275	527	185	365	593.8	235	455	857.8	296.11	530	992.8
4.56	6	7.8	35.56	96	204.8	85.56	186	366.8	135.56	276	528.8	185.56	366	592.8	235.56	456	859.8	297.22	531	994.8
5.67	7	8.6	36.11	97	205.8	86.11	187	367.8	136.11	277	530.8	186.11	367	591.8	236.11	457	861.8	298.33	532	996.8
6.78	8	9.4	36.67	98	206.8	86.67	188	368.8	136.67	278	532.8	186.67	368	590.8	236.67	458	863.8	299.44	533	998.8
7.89	9	10.2	37.22	99	207.8	87.22	189	369.8	137.22	279	534.8	187.22	369	589.8	237.22	459	865.8	300.56	534	1000.8
9.00	10	11.0	37.78	100	212	87.78	190	374	137.78	280	536	187.78	370	588.8	237.78	460	867.8	301.67	535	1002.8
10.11	11	11.8	38.33	101	213.8	88.33	191	375.8	138.33	281	537.8	188.33	371	587.8	238.33	461	869.8	302.78	536	1004.8
11.22	12	12.6	38.89	102	214.8	88.89	192	376.8	138.89	282	538.8	188.89	372	586.8	238.89	462	871.8	303.89	537	1006.8
12.33	13	13.4	39.44	103	215.8	89.44	193	377.8	139.44	283	541.8	189.44	373	585.8	239.44	463	873.8	305.00	538	1008.8
13.44	14	14.2	40.00	104	219.2	89.99	194	381.2	140.00	284	543.2	190	374	584.8	240.00	464	875.8	306.11	539	1010.8
14.56	15	15.0	40.56	105	221	90.56	195	383	140.56	285	545	190.56	375	583.8	240.56	465	877.8	307.22	540	1012.8
15.67	16	15.8	41.11	106	222.8	91.11	196	384.8	141.11	286	546.8	191.11	376	582.8	241.11	466	879.8	308.33	541	1014.8
16.78	17	16.6	41.67	107	224.8	91.67	197	386.8	141.67	287	548.8	191.67	377	581.8	241.67	467	881.8	309.44	542	1016.8
17.89	18	17.4	42.22	108	226.8	92.22	198	388.8	142.22	288	550.8	192.22	378	580.8	242.22	468	883.8	310.56	543	1018.8
19.00	19	18.2	42.78	109	228.2	92.78	199	390.2	142.78	289	552.2	192.78	379	579.8	242.78	469	885.8	311.67	544	1020.8
20.11	20	19.0	43.33	110	230	93.33	200	392	143.33	290	554	193.33	380	578.8	243.33	470	887.8	312.78	545	1022.8
21.22	21	19.8	43.89	111	231.8	93.89	201	393.8	143.89	291	555.8	193.89	381	577.8	243.89	471	889.8	313.89	546	1024.8
22.33	22	20.6	44.44	112	233.8	94.44	202	395.8	144.44	292	557.8	194.44	382	576.8	244.44	472	891.8	315.00	547	1026.8
23.44	23	21.4	45.00	113	235.8	95.00	203	397.8	145.00	293	559.8	195.00	383	575.8	245.00	473	893.8	316.11	548	1028.8
24.56	24	22.2	45.56	114	237.2	95.56	204	399.2	145.56	294	561.2	195.56	384	574.8	245.56	474	895.8	317.22	549	1030.8
25.67	25	23.0	46.11	115	239	96.11	205	401	146.11	295	563	196.11	385	573.8	246.11	475	897.8	318.33	550	1032.8
26.78	26	23.8	46.67	116	240.8	96.67	206	402.8	146.67	296	564.8	196.67	386	572.8	246.67	476	899.8	319.44	551	1034.8
27.89	27	24.6	47.22	117	242.8	97.22	207	404.8	147.22	297	566.8	197.22	387	571.8	247.22	477	901.8	320.56	552	1036.8
29.00	28	25.4	47.78	118	244.8	97.78	208	406.8	147.78	298	568.8	197.78	388	570.8	247.78	478	903.8	321.67	553	1038.8
30.11	29	26.2	48.33	119	246.2	98.33	209	408.2	148.33	299	570.2	198.33	389	569.8	248.33	479	905.8	322.78	554	1