Appendix B - Sensor Resistance Charts

Thermistor Definitions NTC = Negative Temperature Coefficient				
Thermistor	Condition		Primary Range (Degrees F)	Accuracy (Over Primary Range)(Degrees F)
	Shorted (Ohms)	Open (Ohms)		
Outdoor	< 1000	> 350,000	-20 to 50	1 Deg. F
Liquid Line	< 1000	> 350,000	-25 to 45	1 Deg. F
Discharge	< 100	> 100,000	80 to 280	3 Deg. F
Bonnet	< 200	> 100,000	90 to 120	1 Deg. F

Figure B - 1 - Thermistor Definitions / NTC = Negative Temperature Coefficient

Ambient (Outdoor) Sensor Temperature / Resistance / Voltage - Conversion Chart					
Temperature Degrees F	Resistance Ohms	Voltage DC	Temperature Degrees F	Resistance Ohms	Voltage DC
-25	196,871	3.89	55	17,255	1.18
-20	166,342	3.73	60	15,.310	1.07
-15	138,482	3.56	65	13,474	0.96
-10	118,108	3.39	70	11,942	0.87
-5	100,260	3.20	75	10,449	0.79
0	86,463	3.01	80	9,299	0.71
5	72,940	2.82	85	8,250	0.64
10	61,711	2.63	90	7,401	0.58
15	53,640	2.44	95	6,530	0.52
20	46,200	2.25	100	5,774	0.47
25	40,153	2.07	105	5,208	0.42
30	34,367	1.90	110	4,663	0.38
35	29,986	1.74	115	4,203	0.34
40	26,092	1.58	120	3,743	0.31
45	3,047	1.44	125	3,381	0.28
50	19,903	1.30	130	3,047	0.25

Figure B - 2 - Outdoor Sensor - Temperature / Resistance / Voltage - Conversion Chart

Bonnet Sensor Temperature / Resistance / Voltage - Conversion Chart					
Temperature Degrees F	Resistance Ohms	Voltage DC	Temperature Degrees F	Resistance Ohms	Voltage DC
50	19,903	3.96	110	4,663	2.36
55	17,255	3.84	115	4,203	2.22
60	15,310	3.72	120	3,743	2.09
65	13,474	3.60	125	3,381	1.96
70	11,942	3.47	130	3,047	1.84
75	10,449	3.33	135	2,774	1.72
80	9,299	3.20	140	2,488	1.61
85	8,250	3.06	145	2,235	1.50
90	7,401	2.92	150	2,041	1.40
95	6,530	2.78	155	1,854	1.30
100	5,774	2.63	160	1,693	1.23
105	5,208	2.49	165	1,530	1.14

Figure B - 3 - Bonnet Sensor - Temperature / Resistance / Voltage - Conversion Chart

Liquid Line (Coil) Sensor Temperature / Resistance / Voltage - Conversion Chart					
Temperature Degrees F	Resistance Ohms	Voltage DC	Temperature Degrees F	Resistance Ohms	Voltage DC
-25	196,871	3.71	45	23,013	1.25
-20	166,342	3.54	50	19,903	1.13
-15	138,482	3.36	55	17,255	1.02
-10	118,108	3.17	60	15,310	0.91
-5	100,260	2.98	65	13,474	0.82
0	86,463	2.78	70	11,942	0.74
5	72,940	2.58	75	10,449	0.66
10	61,711	2.39	80	9,299	0.60
15	53,640	2.20	85	8,250	0.54
20	46,200	2.02	90	7,401	0.48
25	40,153	1.84	95	6,530	0.43
30	34,367	1.68	100	5,774	0.39
35	29,986	1.52	105	5,208	0.35
40	26,092	1.38	110	4,663	0.32

Figure B - 4 - Liquid Line Sensor - Temperature / Resistance / Voltage - Conversion Chart

Discharge Line Sensor Temperature / Resistance / Voltage - Conversion Chart					
Temperature Degrees F	Resistance Ohms	Voltage DC	Temperature Degrees F	Resistance Ohms	Voltage DC
60	15,310	4.50	180	1,177	2.04
65	13,474	4.44	185	1,070	1.94
70	11,942	4.37	190	974	1.83
75	10,449	4.31	195	899	1.74
80	9,299	4.23	200	823	1.64
85	8,250	4.15	205	764	1.55
90	7,401	4.06	210	700	1.46
95	6,530	3.97	215	651	1.38
100	5,774	3.88	220	599	1.30
105	5,208	3.77	225	561	1.23
110	4,663	3.67	230	517	1.16
115	4,203	3.56	235	476	1.09
120	3,743	3.45	240	442	1.03
125	3,381	3.33	245	406	0.97
130	3,047	3.22	250	379	0.91
135	2,774	3.09	255	349	0.86
140	2,488	2.98	260	327	0.81
145	2,235	2.85	265	304	0.76
150	2,041	2.73	270	284	0.72
155	1,854	2.61	275	265	0.67
160	1,693	2.49	280	248	0.64
165	1,530	2.38	285	232	0.60
170	1,400	2.26	290	217	0.57
175	1,287	2.15	295	203	0.53

Figure B - 5 - Discharge Line Sensor - Temperature / Resistance / Voltage - Conversion Chart