



### CAUTION



865 Series Controller should only be used in combination with special purpose motors approved for use with phase modulation. Consult motor manufacturer or HCC factory for motor selection guidance.

Condition	Cause	Solution
<b>Motor Will Not Run</b> (FAULT LED MAY BE "ON")	<ol style="list-style-type: none"> <li>1. The motor is not properly wired.</li> <li>2. Sensor open.</li> <li>3. Sensor below 50°F.</li> <li>4. Motor "OFF" on internal overload.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recheck wiring. Verify "In Phase" Connections.</li> <li>2. Replace Sensor.</li> <li>3. Proper operation.</li> <li>4. Motor protection reset.</li> </ol>
<b>Motor Runs at Full Speed Only</b> (FULL LED "ON")	<ol style="list-style-type: none"> <li>1. Jumper J1 in CAL/MAN SPD position</li> <li>2. System low on refrigerant (Hot gas in liquid line)</li> <li>3. Sensor shorted. (Verify Ohms vs. Temp.)</li> <li>4. Sensor above 80°F.</li> <li>5. Unit misadjusted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Place J1 in OPERATE/STORE position.</li> <li>2. Check/restore proper refrigerant charge.</li> <li>3. Replace Sensor.</li> <li>4. Proper operation.</li> <li>5. Recalibrate per instructions.</li> </ol>
<b>Motor Overheats</b>	<ol style="list-style-type: none"> <li>1. The selected motor not "approved" unit.</li> <li>2. Fan blade overloads the motor, excessive current occurs, the motor's internal Klixon trips.</li> <li>3. Motor is not ventilating properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Obtain an approved, special purpose motor, for phase proportioning speed control and size for application.</li> <li>2. Use a larger approved motor, and/or change fan blade size or pitch.</li> <li>3. Check vent slots for obstruction.</li> </ol>
<b>Motor Runs Backwards</b>	<ol style="list-style-type: none"> <li>1. Unit miswired.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reverse lines T1 and T2 on the output side of the control..</li> </ol>
<b>Motor Will Not Modulate Properly</b>	<ol style="list-style-type: none"> <li>1. Fan blade does not load motor at full RPM (speed).</li> <li>2. Sensor ohms for temperature measured is not in compliance with values in the instructions.</li> <li>3. Max. Speed Adj. turned fully clockwise (CW).</li> <li>4. Motor design not applicable for proper phase proportioning speed regulation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Compare FLA rating to actual measured FLA at Full Speed.</li> <li>2. Verify Ohms vs. Temperature values. Replace Sensor.</li> <li>3. Recalibrate per instructions.</li> <li>4. Replace motor with an approved model.</li> </ol>

## SENSOR TEMPERATURE TO RESISTANCE TABLE

Temperature (°F)	Resistance (Ohms)	Temperature (°F)	Resistance (Ohms)
40.0	26120	80.0	9298
42.0	24710	80.5	9189
44.0	23390	81.0	9080
46.0	22160	81.5	8970
47.0	21575	82.0	8861
47.5	21283	82.5	8758
48.0	20990	83.0	8654
48.5	20718	83.5	8551
49.0	20445	84.0	8448
49.5	20173	84.5	8350
50.0	19900	85.0	8252
50.5	19640	86.0	8056
51.0	19381	87.0	7870
51.5	19125	88.0	7685
52.0	18870	89.0	7510
52.5	18621	90.0	7334
53.0	18372	91.0	7167
53.5	18141	92.0	7000
54.0	17910	93.0	6842
54.5	17690	94.0	6684
55.0	17470	95.0	6533
56.0	17020	96.0	6382
57.0	16590	98.0	6047
58.0	16160	100.0	5827
59.0	15730	102.0	5571
60.0	15290	104.0	5327
61.0	14910	106.0	5093
62.0	14530	108.0	4874
64.0	13810	110.0	4665
65.0	13480	112.0	4465
66.0	13130	114.0	4276
68.0	12490	116.0	4095
69.0	12190	118.0	3923
70.0	11890	120.0	3759
71.0	11610	122.0	3603
72.0	11320	124.0	3455
74.0	10780	126.0	3313
75.0	10530	128.0	3178
76.0	10270	130.0	3049
76.5	10135	132.0	2927
77.0	10000	134.0	2808
77.5	9875	136.0	2647
78.0	9743	138.0	2590
78.5	9632	140.0	2488
79.0	9521	142.0	2392
79.5	9410		

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