



## INSTALLATION & OPERATING INSTRUCTIONS FOR SEASONS-4 CONDENSER FAN CONTROL

SEASONS-4

### DESCRIPTION:

The sequencer allows for control of the condensing temperatures and improves efficiency. The sequencer limits the minimum condensing temperature, maintaining the design evaporator temperature and insures adequate pressure for the expansion device. The multiple sensor is used in multiple condenser applications to select the highest liquid line temperature for controlling the condenser fans.

### APPLICATIONS:

The condensing temperature of an air-cooled condenser is directly related to the degree of subcooling that occurs within the condenser surface for a specific quantity of airflow and ambient air temperature. Air-cooled condensers often utilize multiple refrigerant circuits within the common airflow of a single or multiple fan condenser. For ambient control the heaviest loaded circuit representative of the highest liquid temperature must be selected. This liquid temperature is required to set the condenser flow rate for the level of heat rejection for the specific ambient encountered. Ambient control of multi-circuited condensers is accomplished by varying condenser airflow in incremental steps by staging multiple fans. The sequencer is factory calibrated for liquid line sensing of up to six fans (see table 1).

Regarding technical assistance, please refer to the following control part numbers:

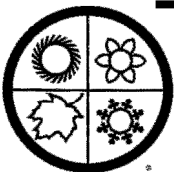
2 stage sequencer	4053820364	2 sensor selector	4053890861
4 stage sequencer	4053820863	4 sensor selector	4053890851
6 stage sequencer	4053820363	6 sensor selector	4053890862

If re-calibration is required, refer to “Re-calibrating Sequencer” or contact the factory.

### RECALIBRATING SEQUENCER:

**NOTE:** Pots are sealed, check voltage before adjusting. Should the sequencer require re-calibration, refer to the values in Table 1. With compressor control circuit de-energized:

- 1) Remove “common” from relays on sequencer to de-energize condenser fan circuit.
- 2) Remove either the sensor wires or the yellow wire from VDC (P4) and the yellow and black on LO (P5)
- 3) Place jumper tab across both pins of “JP1”.
- 4) Attach digital voltmeter to “TP1” (+) and “AUX OUT” (-).
- 5) Apply 24 volt AC power.
- 6) Select from Table 1 the temperature (°F) that energizes the condenser fans. Stage 1 should always be the lowest temperature, stage 4 or 6 should always be the highest temperature.
- 7) Set “CAL” pot CW or CCW to VDC selected from energizing stage 1.



SEASONS 4

- 8) Turn "STG1" until relay just energizes.
- 9) Repeat steps 6 and 7 for 2<sup>nd</sup> through 4<sup>th</sup> or 6<sup>th</sup> stages for DC voltages selected.
- 10) Remove the jumper tab from "JP1". Replace the jumper tab to only one pin of "JP1" for storage.
- 11) Reinstall wires from step 2.
- 12) Re-install "common" to relays to re-connect condenser fan circuit.
- 13) Re-install compressor control circuit and start A/C system.

Table 1

Fans To Be Controlled	Stages Required	Use Stage Number	Sequencer Factory Calibration Values												
			#1		#2		#3		#4		#5		#6		
			(F)	VDC	(F)	VDC	(F)	VDC	(F)	VDC	(F)	VDC	(F)	VDC	
2	2 Stages	1,2	60	5.7	79	12.5									
3	3 Stages	1,2,3	60	5.7	75	10.6	94	16.6							
4	4 Stages	1,2,3,4	60	5.7	75	10.6	90	15.5	94	16.6					
5	5 Stages	1,2,3,4,5	60	5.7	71	9.4	82	13.0	86	14.2	94	16.6			
6	6 Stages	1,2,3,4,5,6	60	5.7	71	9.4	82	13.0	86	14.2	90	15.5	94	16.6	

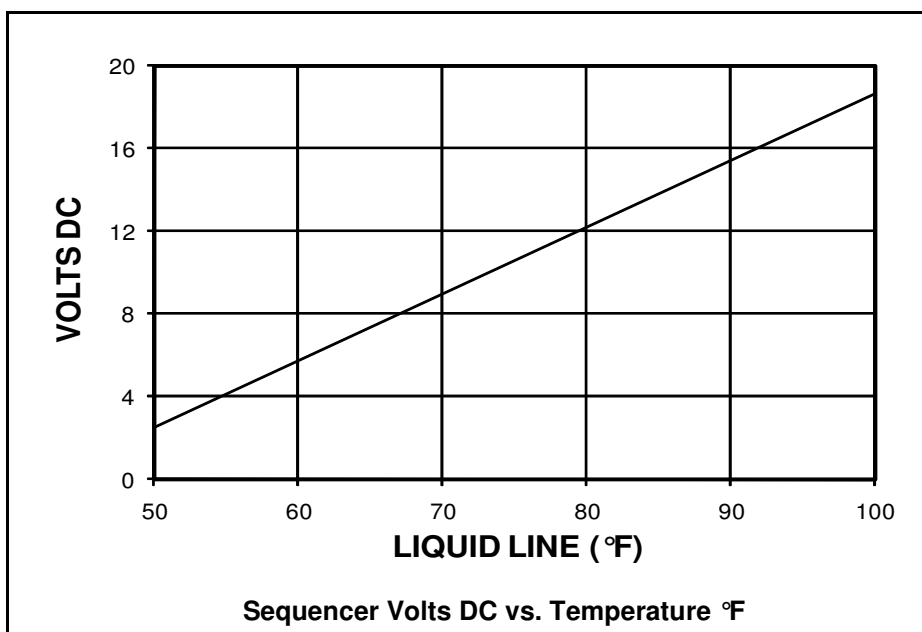


Figure 1