



F.Y.I.

TEMPERATURE CONTROLLERS... PORTABLE CHILLERS... CENTRAL CHILLERS... PUMP TANK STATIONS... TOWER SYSTEMS...

SUBJECT: VOLTAGE CONVERSION FOR SENTRA 'SK' TEMPERATURE CONTROLLERS MANUFACTURED PRIOR TO JANUARY 1, 2011

#1-I-218 4/16/1997
updated 4/23/2013

A qualified field technician can convert the voltage on most standard Advantage Sentra "SK" temperature control units. Contact the Advantage Service department with your unit serial number to confirm that your unit can be converted. After confirming that your unit can be converted use this document as a guide to making the voltage change.

This document outlines the steps required to change the voltage from 230 to 460 or from 460 to 230 volt for units manufactured prior to approximately January 1, 2011. Refer to FYI document 311 for voltage conversion instructions for units manufactured after January 1, 2011.

Assistance is available during business hours from the Advantage Service department at 317-887-0729. Contact Advantage for other power supply requirements.

VOLTAGE CONVERSION PROCEDURE

1. For a field voltage conversion, the following items will require replacement or rewiring. Contact the ADVANTAGE Service Department for the proper replacement parts:

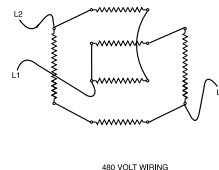
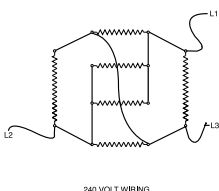
- heater (rewiring)
- pump motor (rewiring)
- transformer (rewiring)
- overloads (replacement)

2. Disengage process operations according to the procedure outlined in section 3.4 of the operations manual. Typically, this requires reducing process temperature to below 85°F, discontinuing operations and dissipating all system pressure.

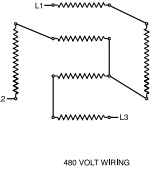
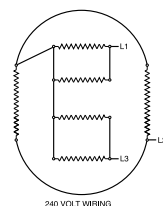
3. Follow proper lock-out/tag-out procedures to disengage the main electrical power supply.



4. Remove the stainless steel lift-off cover panel.
5. Locate the heater. Most Sentra units use a single heater mounted in the discharge cylinder. Some units may use a heater in both the discharge and suction cylinders. Note that all heaters must be rewired. Remove the cover plate to the heater junction box and note the 'current' wiring installation. The 'new' installation is shown in the schematics below.

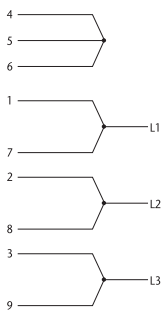


Effective on models manufactured before 10-01-02.
Watlow part # 6-29-120-5

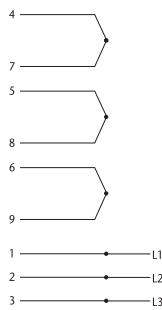


Effective on models manufactured on or after 10-01-02.
Watlow part # 6-21-299-1

208/230

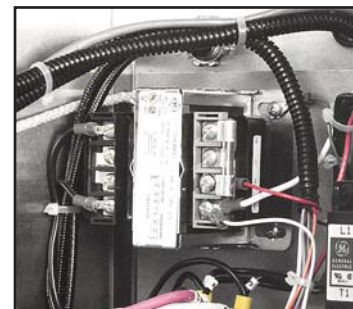


460/480



Pump Motor Wiring

6. Open the electrical panel cover to locate the electrical motor. For convenience and greater access area, the panel cover support straps and the instrument cables can be removed so the cover opens flat. Most Sentra pump motors are dual voltage. Note the 'current' installation and the 'new' installation according to the schematic in the previous column.
7. Locate the transformer mounted on the electrical panel. Note the 'current' installation. A schematic printed on the transformer body details the 'new' installation.



8. Locate the motor overloads. The three overloads must be replaced with a set sized for the 'new' voltage. Simply unscrew the 'old' set of overloads and replace with the 'new' set.



9. Once a voltage conversion is complete be certain the unit is properly connected to the 'new' voltage supply as outlined in the operations manual. Restart unit operations according to the operations manual.

NOTE: THIS DOCUMENT DOES NOT APPLY TO CURRENT PRODUCTION MODELS.