

Temperature Controller Replacement

Replacement of Fenwal Temperature Indicator/Alarm Switch with United Electric Controls Unit (P/N 6200) in Model 5295 Condenser-Filter Dehydrator

This procedure applies to Models 5295 Mark I, Mk IA, Mk II, Mk III, Mk IV, Mk V, Mk VI, and Mk X.

Lockout-Tagout.

- a. Close the air inlet and outlet valves (external to the unit).
- b. Close the water inlet and outlet valves (external to the unit).

WARNING

The dehydrator operates on 115 VAC. This voltage can kill or injure. When performing repairs, lock and tag out the unit. Only qualified, authorized personnel should attempt electrical maintenance on energized equipment.

- c. Open the external electrical disconnect to remove power from the unit.
- d. Press the manual override buttons on the filter auto drains to drain the filters.
- e. Open the manual drain valve. This bleeds residual air pressure from the unit.
- f. Lock out and tag out the electrical disconnect.

Temperature Controller Replacement.

CAUTION

Be careful not to lose the spacer when removing the sensor bulb.

CAUTION

Handle the capillary very carefully to avoid kinking or pinching it.

- f. Trace the temperature capillary from the indicator to its well in the heat exchanger outlet manifold.

NOTE

The sensing bulb is located in a well, isolated from the 125 psig in the air system.

- g. Pull the hitch pin to release the sensor bulb from its well. Remove the spacer, then the sensor bulb, from the well. Remove tie-wraps as necessary to release the capillary tube.
- h. Pull the adjusting knob(s) off the front of the temperature indicator/alarm switch, if applicable. Unscrew the four screws on the front of the temperature indicator/alarm switch to release its front cover. Remove the front cover. This exposes the four mounting bolts that secure the indicator to the instrument panel.
- i. Remove the white scale plate from behind the indicating needles in the indicator housing. This allows access to the conduit fitting from the front.
- j. Unscrew the four screws that secure the access cover on the top of the indicator housing, in back of the panel. Remove the access cover to expose the wire terminals.
- k. Disconnect the two wires from the terminals directly under the cover plate. Mark the wires to ensure correct reinstallation.
- l. Remove the electrical conduit from the side of the indicator housing and withdraw the wires.
- m. Remove the nuts from the four mounting bolts. Remove the indicator.
- n. Secure the new controller's mounting bracket to the panel.
- o. Remove the four screws securing the faceplate of the new controller. Remove the set screw (5/64" Allen) securing the adjusting knob. Remove the knob and the faceplate.
- p. Install the conduit fitting in the top left side of the new controller.
- q. Cut off the connectors on the incoming electrical leads and strip the wire ends. Using butt splices (provided), connect the leads as follows: #16 to violet (common), #18 to blue (NO) Leave the black wire (NC) unconnected but insulated by the butt splice.

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- r. Reinstall the faceplate and the adjusting knob.

CAUTION

Avoid bending or coiling the capillary tube tighter than 1/2" radius. Exercise caution when making bends near the capillary ends.

- s. Insert the temperature sensing bulb in the thermal well and secure it using the spacer and the hitch pin.

Restart the Unit.

- t. Close the manual drain valve.
- u. Check to be sure that the setpoint needle on the temperature indicator/alarm switch is set at 55° F.
- v. Check to be sure that the calibration valve end cap are in place and secured, and that the calibration valve on the instrument panel is open.
- w. Place the compressor interlock switch in the ON position.
- x. Place the audible alarm switch in the ON position.
- y. Turn on the power to the dehydrator at the external source. The power-on lamp will light.
- z. Admit cooling water to the unit by turning on the external inlet and outlet water valves. After several minutes of cooling water flow, the inlet water temperature gauge should indicate no higher than 51° F. If the gauge indicates a temperature above 51° F, check the chilled water supply before proceeding.
- aa. Press the lamp test push button. The high-temperature alarm lamp should flash. If it does not, troubleshoot in accordance with the technical manual.
- ab. Open the air inlet and outlet valves (external to the unit) to start air flow through the unit. The dehydrator is now in continuous, automatic operation.
- ac. Monitor dehydrator performance. The inlet air temperature should remain below 125° F; the inlet air pressure gauge should read between 80 and 155 psig.

(Optional) You may check the calibration of the temperature controller as follows:

- a. Remove the temperature bulb from its well at the bottom of the heater.
- b. Place the temperature bulb and the bulb of a calibrated temperature gauge or thermometer into a bath of cold water at the same time. Compare the readings. If they do not agree within 2° F, send the temperature controller to an approved facility for calibration at the earliest opportunity.
- c. Repeat step b with a hot water bath.
- d. Reinstall the unit temperature bulb.
- e. Restart the unit per steps t through ac above.