THERMOLEC

D21-PS:

The first step in testing the D21-PS controller is to confirm that there is 24 VAC powering the board (top left connections on the board). The airflow sensor is a device that protects the heater element section from overheating. If there is a lack of proper airflow, the controller and the airflow sensor will make the unit modulate proportionally with the airflow. This simply means that, if the element section is getting half of the needed airflow, the heater will work at half the capacity. This prevents overheating of the elements which would damage them. For testing purposes, remove the Airflow sensor from the terminals A and A. When that airflow sensor is removed, the heater will still operate normally but without element protection (this is only for testing). Make sure you reconnect the airflow sensor after testing.

Next step is to remove the two wires on the SSR + and – connections (top right connections on the controller) and jumper

those two connections. You then have to determine what the input signal is. If it is 0-10 VDC, force your signal to be 10 VDC to make the controller go full heat. If the input is AC/DC Pulse, send a pulse (4V amplitude min) to make the controller go full heat. Make sure the little white jumper is positioned properly depending on the type of input provided (i.e. for 0-10 VDC, jumper on the left side and for AC/DC Pulse, jumper on the right side).

If the red light on the controller is solid ON, the controller is good. If the red light stays off, the controller is defective and replacement is required.