

Model- DFL



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Dual Fan and Limit Control

Specifications

Sensor: Thermistor Length (10 ft.)

Accuracy: +/-3°F of set point

Power Input: 24 VAC, 120 VAC

Control Operation: Fan – Closes on Rise

High Limit – Opens on Rise

Output Ratings: Two - SPST Relays

15 amps @ 230 VAC (Resistive Load)

Optional: Two-SPDT Relays

Temperature Range:

Fan: 80°F to 120°F (25°C to 50°C)

High Limit: 150°F to 300°F (65°C to 145°C)

Differential Adjustment Range:

Fan: 5°F to 50°F

High Limit: 1°F to 15°F

Operating Temperature: -30°F to 140°F

(-35°C to 60°C)

Connections: ¼" Quick Connects,

6" Wire Leads (optional)

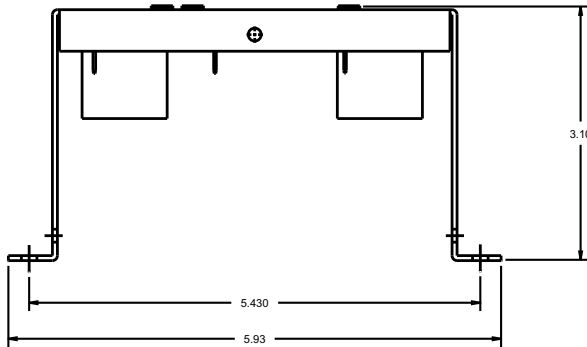
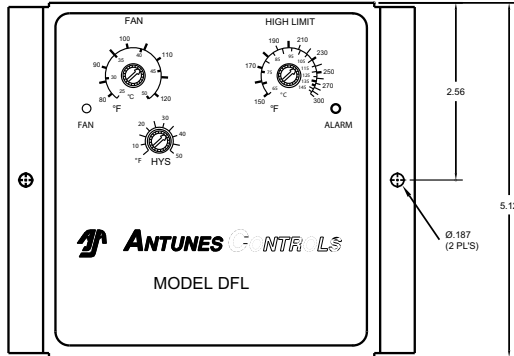
Package: Aluminum 5.1" x 5.9" x 3.1"

"C" Bracket

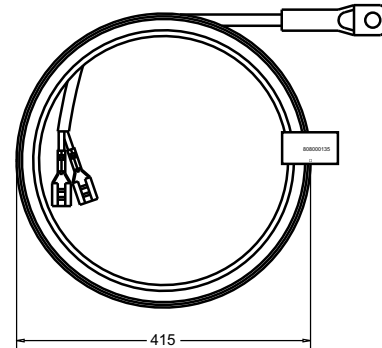
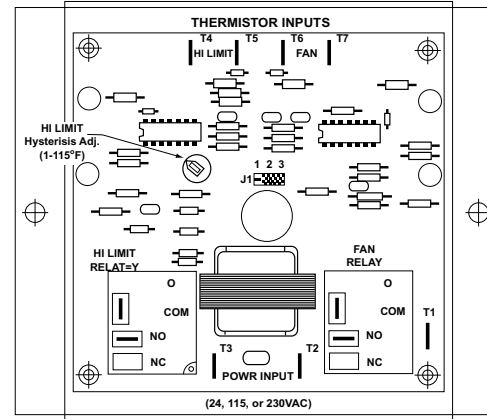
Enclosure w/conduit knockout (optional)

This control is compact and easily installed. Please read this instruction sheet carefully to assure correct installation. Prior to being put into operation, check all wiring and function of unit.

Dimensions



BACK VIEW

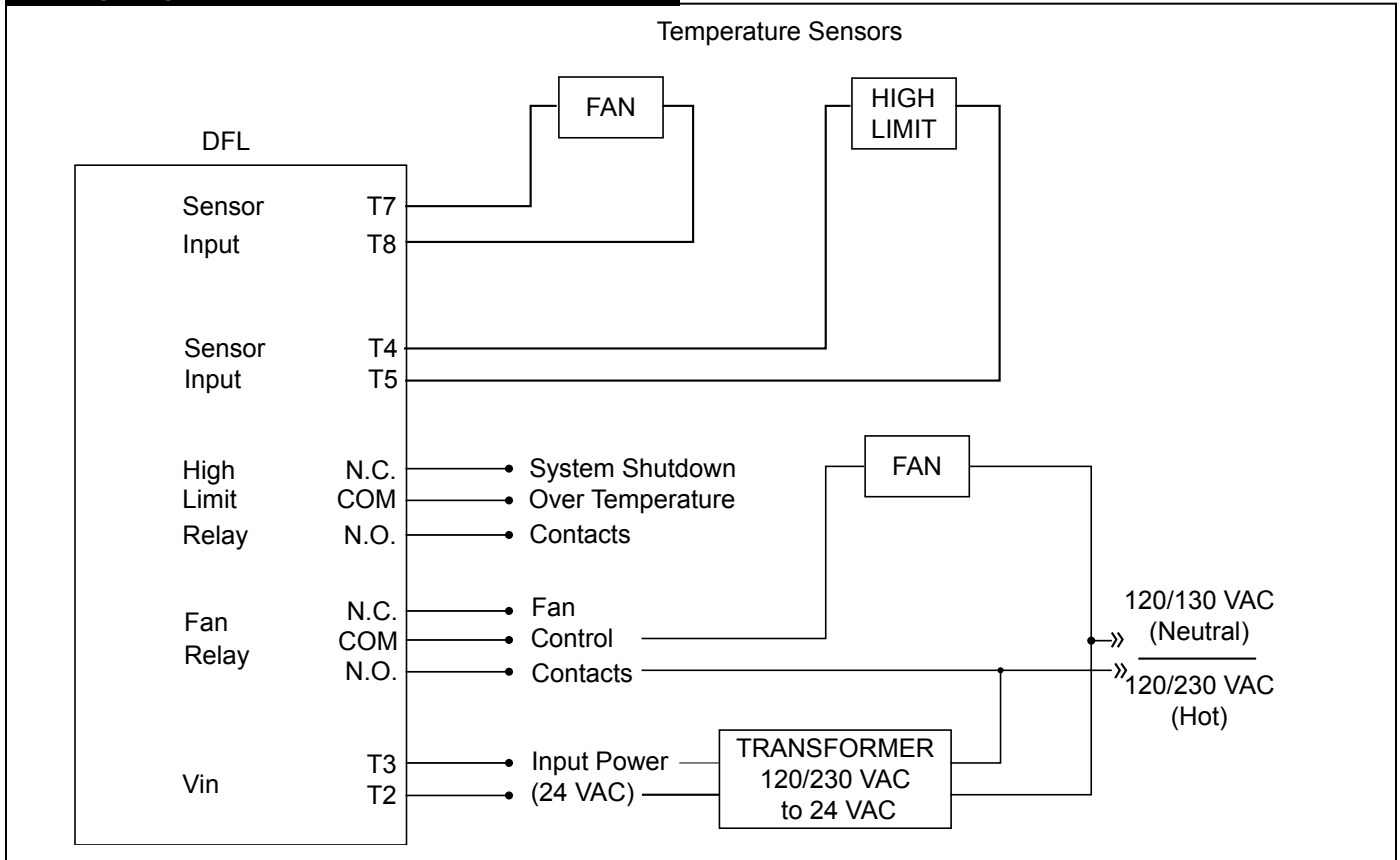


Unit Operation

The DFL combines the operation of a single speed fan control with that of a warm air high limit control. The fan section of the control activates a p.c. mounted Fan Relay which is controlled by the Fan Thermistor Sensor. During the initial power-up state the sensor temperature will be below the setting set by the front panel potentiometer labeled Fan Limit and the Fan Relay will be activated and a front panel Fan LED will light. Once the thermistor temperature rises above the Fan Limit temperature then the Fan Relay is de-activated and the Fan LED will not be lit. The Fan Relay will be re-activated once the Fan Thermistor Sensor temperature drops below the Fan Limit potentiometer setting minus front panel HYS potentiometer setting. As an example, if the Fan Limit potentiometer is set to 100°F, and the HYS potentiometer is set to 20°F, then the Fan relay will re-activate once the Fan Thermistor drops below 90°F. The temperature range of the Fan Limit potentiometer is from 80°F to 120°F. The HYS potentiometer adjustment range is 5°F to 50°F.

The operation of the High Limit section of the control is similar in operation to the Fan Limit except that the High Limit Relay is activated when the High Limit Thermistor Sensor temperature is below the setting of the front panel High Limit set point potentiometer. Once the High Limit potentiometer temperature setting has been exceeded the High Limit Relay will be de-activated and a second front panel LED labeled Alarm will light. The High Limit relay will stay de-activated until the High Limit Thermistor temperature drops below the High Limit set point potentiometer minus an internally mounted hysteresis potentiometer. This internally mounted potentiometer has an adjustment range of 1°F to 15°F and is accessible only from inside the control. See figure showing back view of unit for location of this potentiometer. The control also has an option of using either 1 or 2 thermistors to control the Fan and High Limit Relays. This selection is determined by the position of a 2 pin jumper plug inserted onto the connector labeled J1. If the jumper plug is inserted so that positions 2 & 3 are shorted together then only the Fan thermistor sensor is needed. If however the jumper is placed between positions 1 and 2 then both Fan and High Limit thermistors are needed.

Wiring Diagram



Connections

Thermistor Inputs: (100 kohm @ 25°C)

Fan: T7 & T8

High Limit: T4 & T5 (optional)

Power Input: 24 VAC (optional 120 or 230 VAC)

Vin: T3 & T4

Fan Relay: N.O. & COM. On relay body (optional N.C.)

High Limit Relay: N.O. & COM. On relay body (optional N.C.)

Limitation of Liability

It is understood and agreed that seller's liability whether in contract, in tort, under any warranty, in negligence or otherwise shall not exceed the return of the amount of the purchase price paid by purchaser and under no circumstances shall seller be liable for special, indirect or consequential damages.

The price stated for the equipment is a consideration in limiting seller's liability. No action, regardless of form, arising out of the transactions may be brought by purchaser more than one year after the cause of action has accrued.

Warranty

1. Antunes Controls products are guaranteed to be free from mechanical and electrical defects for a period of one year from date of shipment under normal use and service provided installation is made in accordance with manufacturers' recommendations.
2. Parts deemed defective shall be repaired or replaced at manufacturers option and at manufacturers expense but shall not include foreign or federal excise taxes, state or municipal sale or use taxes, all such taxes not limited to the foregoing being responsibility of the purchaser.
3. No charge for travel and/or mileage will be allowed to purchaser.
4. Antunes Controls reserves the right to make changes in design or make any improvements on any products. The right is always reserved to modify our equipment because of new technology, underwriter's requirements and/or government regulations.
5. The following are not covered under warranty:
 - a. Failure from neglect, abuse, careless handling and mis-application of unit.
 - b. Failure to observe guidelines for installation or improper voltage hook-up.
 - c. Failure caused by improper maintenance. (See maintenance guidelines found in operation instructions.)
 - d. Unless specifically allowed by Antunes Controls, no other charges may be included under warranty.

