System 2 Installation Instructions - 2017

The Active Thermal Management System 2, a self-contained ventilating system for small-to-midsize enclosures with moderate heat loads, has been redesigned for 2017. It consists of two 120mm fans on a mounting board which also holds a thermal control board with a remote sensor. A small display on the control board is meant for set-up only. It reads in degrees Celsius, not Fahrenheit.

The System 2 is mounted over a 14 1/2" x 5 1/2 " rectangular hole (not exact - verify this dimension with the System 2 to be installed) located at the hottest part of the enclosure, usually at the top rear, and moves this air out into the room.The foam strips around the base of the System 2 will provide an air-tight seal.

Provision must be made to allow room air to enter the enclosure to replace the hot air being expelled by the System 2. A location low in the enclosure is generally preferred; the best arrangement is that in which air enters and passes by the heat-generating equipment on its way to the System 2's exhaust fans. Avoid locating the inlet too close to the System 2; room air may enter and be immediately exhausted without cooling the enclosure or equipment.

*An air inlet improperly located or too small will prevent the System 2 from operating efficiently.*

After mounting the fan panel, connect the output lead from the power supply to the power jack attached to the control board, and run the thermistor to the vicinity of the hottest area within the rack. The thermistor can be fastened using the adhesive-backed anchor supplied. Direct connection to the heat source will cause the fans to come on sooner than a less-direct connection, such as suspending it over, rather than on, a hot component.

Plug the power supply into an always-live AC source. When the temperature at the thermistor reaches approximately 90F/32C degrees, the fans will begin to turn. The fans will stop when the temperature falls below approximately 85F/29C. A hair dryer can be used to check for proper operation.

Thermistor
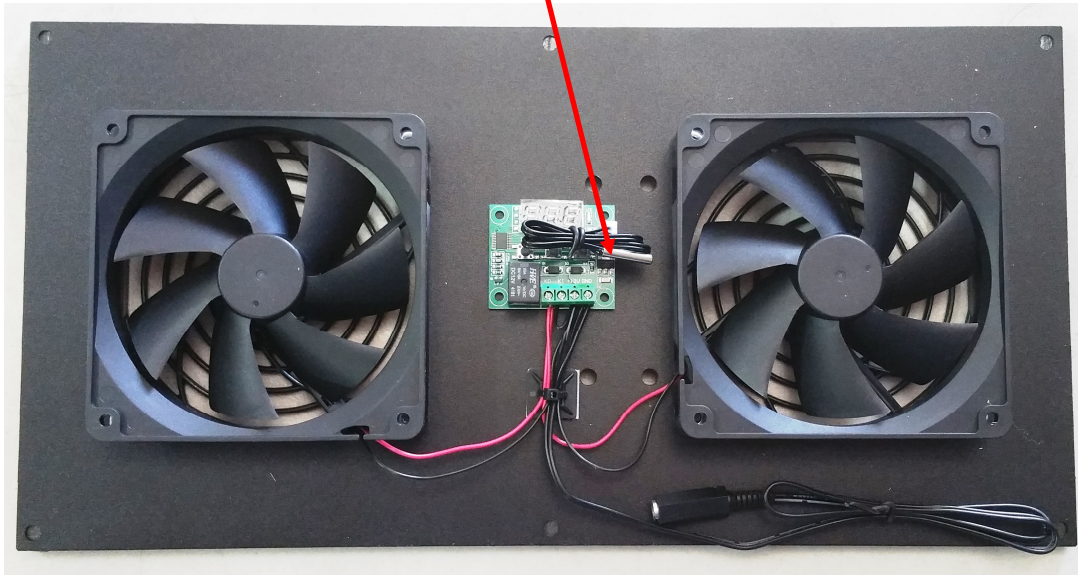
To change the temperature at which the fans turn ON, press the SET button on the control board momentarily; the display will blink. Press the ▼ or ▲ buttons to change to the desired temperature. After a few seconds, the new temperature will be stored.

To change the temperature at which the fans turn OFF, decide how many degrees below the turn-on temperature you wish the fans to stop, called the differential. (The factory setting is 3 Celsius degrees, or about 5 Fahrenheit degrees.) To change the differential:
Hold the SET button for 5 seconds. P0 will be displayed. * Press the ▲ button once to change the display to P1, then press SET again. The present differential temperature will be displayed. Use the ▲ and ▼ buttons to set the desired differential. The display will return to displaying system temperature after a few seconds; the new differential temperature has been stored.

For your convenience, here are some Fahrenheit temperatures and their Celsius equivalents, rounded to the nearest whole degree:

75F = 24C   80F = 27C

85F = 29C   90F = 32C

95F = 35C   100F = 38C

*Pressing the ▲ or ▼ buttons again will cycle the display through the following codes: P1, P2, P3, P4, P5, P6, and back to P0. Many of these codes refer to parameters used in heating and refrigeration systems, not in cooling systems. Should any be adjusted accidentally, restore them to their factory settings:

    P0 – C (for "cooling")
    P1 – Desired differential, set as described above
    P2 - 110
    P3 - -50
    P4 - 0
    P5 - 0
    P6 – Off