

Air Handling System Monitor

Applications:

- Air Handling System Monitor
- Air Flow/No Flow Switch
- Air Flow Confirmation Switch
- Low Air Flow Alarm Switch

Application Background:

Industrial and commercial HVAC systems are basically air handling systems that supply quality air for the buildings and facilities in which they are installed. Confirmation of the air flow throughout the system is important and vital to the efficient and effective delivery of the conditioned air be it cooled or heated.

Application Solution:

There are several air flow monitoring technologies including: paddle/flapper types and turbine vanes. All have proven to work with varying degrees of success. Some rely on operator's time and attention, while some have mechanical parts and are prone to wear, hang-up, and fail.

A better solution for air flow detection at a specific point in a HVAC system is the Thermal Differential Switch. The TD switch has two thermal sensing devices (RTD's) encased in stainless steel tips. One sensor detects the temperature of the ambient air while the second has a small current applied to create a thermal differential above the ambient air temperature. The differential temperature between a fluid flowing and not flowing is different. Therefore the detection of flow at the sensor probe is a simple, reliable technique for a point flow monitor.

With a single process connection into a HVAC duct or line either through a MNPT or flange fitting, a TD probe can be strategically located to monitor for flow of the air. When the probe detects the air flow, the TD switch activates a relay output to confirm that flow is occurring.

Any of the Delta M Corporation microtuf® and Versa-Switch® flow switch product models can provide the solution in this application. The microtuf® II flow switch is the most cost effective model for this application.

See the products section to select your model and configuration to meet your specific needs.