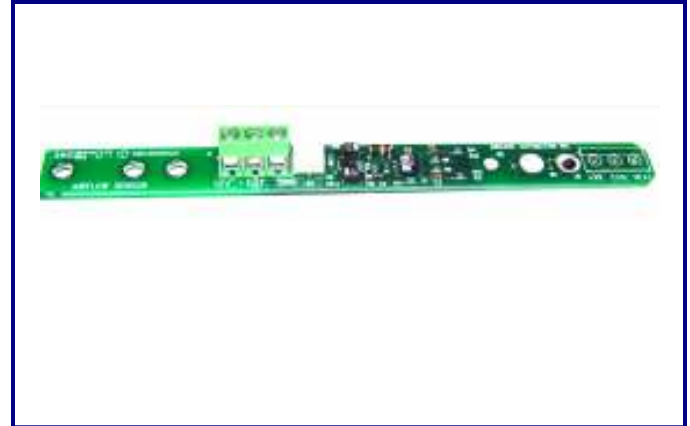


Overview

AirCare's ACM1006A Air-Flow Sensor Module provides a 0-5 volt output relative to an air-flow over the sensor surface. The ACM1006A, along with the AirCare VariPhase™ (ACV1xxx) can provide closed-loop, regulated airflow for fan-controlled systems. Once set-up and configured, the system will automatically adjust fan speed to maintain airflow at the desired set point. **The ACM1006 maybe used only in air or with nonconductive gases. Use with liquids or corrosive gases will damage the unit.**



Product Description

The ACM1006A uses a thermistor bridge to provide feedback to the controller based upon air-flow over the surface of the sensor. The unit has built-in temperature compensation and offers linear air-flow feedback around the mid-point setting of the sensor. The ACM1006A provides small size, ruggedness, excellent stability and reduced drift versus hot-wire solutions. The ACM1006 can be powered from the 12V output of AirCare's VariPhase or an external 12Vdc source.

The ACM1006A can be customized from 75FPM to 500FPM for your output needs. The ACM1006A provides several set-point ranges to cover most air-flow applications. At the set-point (2.5 volts) the ACM1006A provides linear control over +/- 50% of the set-point. A 1-2% change in airflow equates to 50mV change to the output of the ACM1006A.

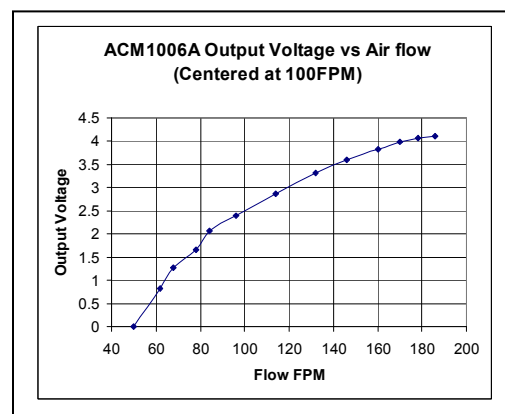
Specification

- Local power supply : 9.5-15Vdc
- Simple connections:
Screw Terminals for output
- Open-frame PCB with mounting bracket or optional rugged enclosure
- 0-50°C operating temperature
- 5.5" x .5" x .06" (board only)
- Current Draw: 50mA (max)
- Set Point and range customized.
- Typical 1% change in Set point = 1-2% change in set-point air-flow .

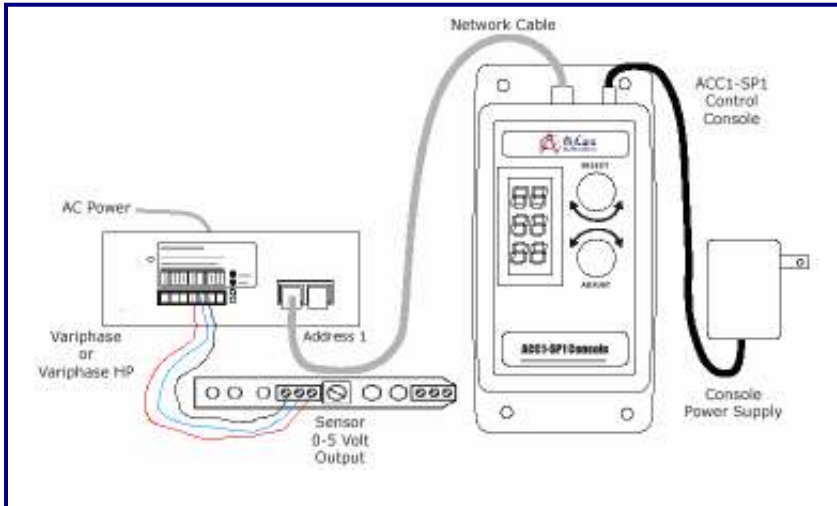
Installation

The ACM1006A can be mounted in various locations to maintain airflow. Whether in the laminar flow of an FFU, or the venturi inlet of a fan filter unit, or in turbulent the air-flow stream, the ACM1006A enables continuous air-flow monitoring and adjustments. Application Note 1010 provides additional information.

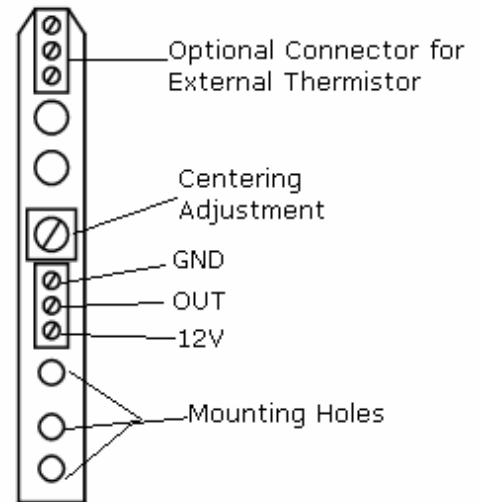
ACM1006A is designed to provide closed loop control of air flow at a set point. It provides linear voltage feedback for small changes (less than 50%) in the set point, but is not linear over the full range of Set Point (0-100%). The curve below shows the voltage feedback vs. the airflow.



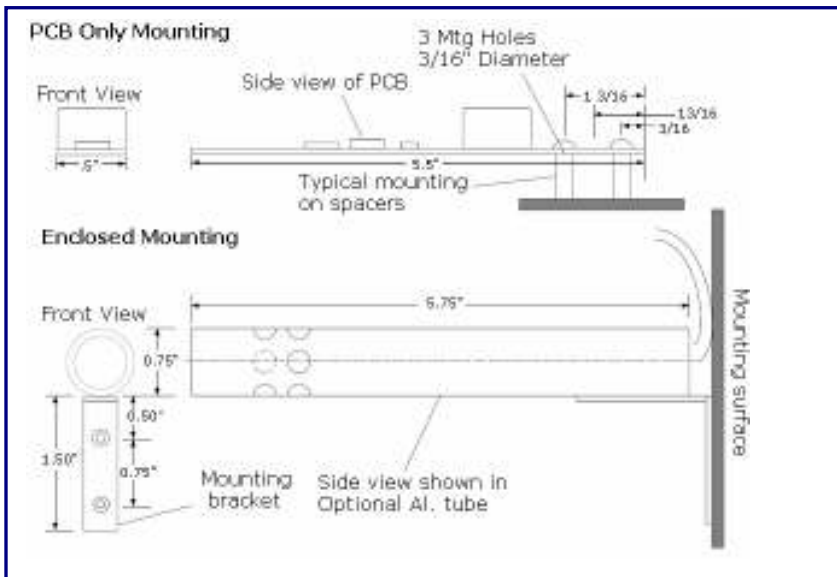
System Diagram:



Wiring Diagram



Mechanical Dimensions



The ACM1006, Air-Flow Sensor, is a 3 Wire Circuit, the three terminals have designations 12V, OUT, and GND.

- 12V is connected to the positive terminal of a 8-15Vdc power supply.
- OUT is an 0-5Vdc output signal from the ACM1006.
- GND is connected to the reference for the power supply.

The ACM1006's centering adjustment is used to adjust the calibrated airflow at 2.5V.



ACM1006A with optional cover and cable