CATEGORY:
- ❑ Temperature
- ❑ Pressure
- ■ Flow
- ❑ Speed
- ❑ Weighing
- ❑ Other

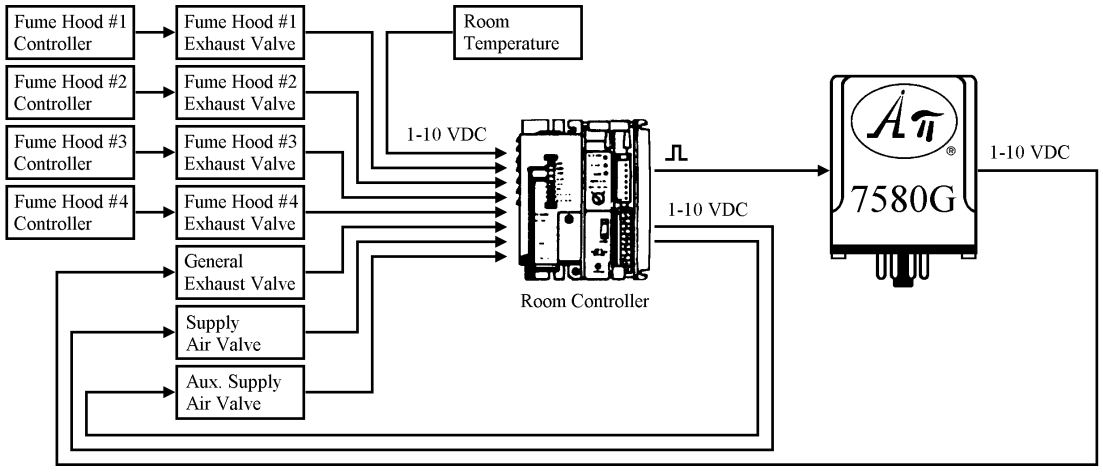
HVAC VARIABLE AIR VOLUME CONTROL

PROBLEM:

The constant volume heating, ventilating and air conditioning (HVAC) system for a wet chemistry laboratory is being converted to variable air volume (VAV) to save energy. The amount of air exhausted by four fume hoods in the lab will vary depending upon their sash positions. A room controller must monitor the room temperature, the quantity of air exhausted and the quantity of air supplied, and operate supply air, auxiliary supply air, and general exhaust air valves to maintain room temperature, room pressure and a minimum number of air changes per hour for comfort and safety. The standard room controller has 8 analog inputs, 2 analog outputs and 1 frequency output, but 3 analog outputs are required.

SOLUTION:

The room temperature sensor and valve position feedback potentiometers are monitored by the eight room controller analog inputs, and the supply air and the auxiliary supply air valves are controlled by the two 1 - 10 VDC analog outputs.



An Api Model 7580G Isolated Frequency to DC Transmitter module converts the frequency output of the room controller to a 1 - 10 VDC signal to control the general exhaust air valve.

Did You Know ... ?

The Api 7580G has field rangeable frequency inputs and DC voltage or current outputs for total flexibility.