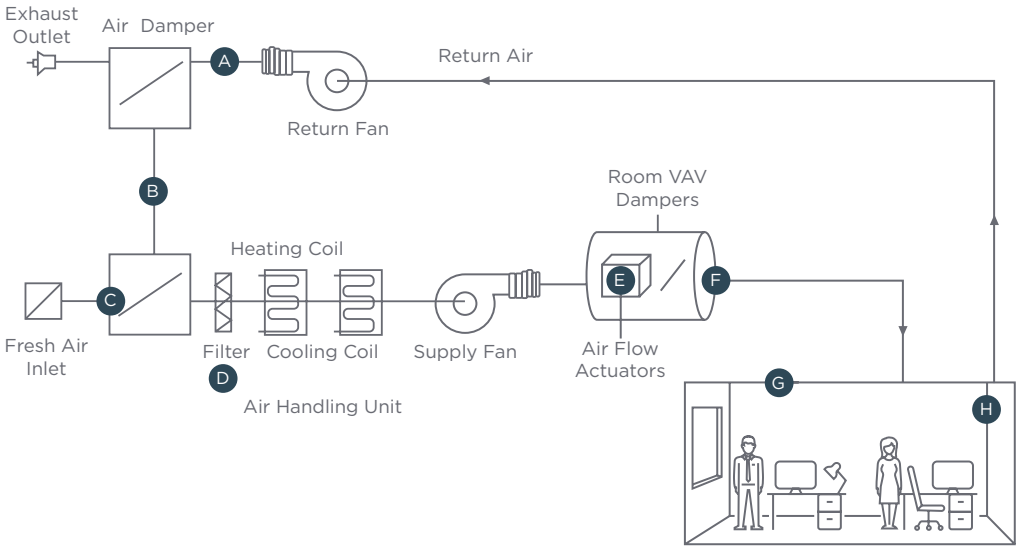
SENSORS FOR VARIABLE AIR VOLUME SYSTEMS

As technology advanced and the costs of heating and cooling increased, innovative solutions were necessary to improve HVAC efficiency. Today, accurate, reliable sensor technology provides data for increased building efficiency and control with variable air volume (VAV) systems. In larger buildings with multiple zones and changing occupancy, VAV controllers are more effective than previous constant air volume designs. VAV uses a constant temperature and varies the air volume to keep spaces comfortable while saving energy. The volume flow is controlled through dampers. When an individual space's load changes, the damper in a VAV system will adjust to compensate.

TE CONNECTIVITY ADVANTAGES

- Portfolio Breadth
- Industrial Technology Leadership
- Manufacturing Scale
- Customization Capability

VARIABLE AIR VOLUME



- A Temperature Sensor
- B Humidity Sensor
- C Inlet Temperature Sensor
- D Filter Clogging Differential Pressure Sensor
- E Actuator Position Feedback
- F Differential Pressure/ Airflow Sensor
- G Humidity Sensor
- H Temperature Sensor

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Sensor Technology		Application	Key Product Features	Benefits
SM9000		• Monitoring very low pressure properties for ventilation • VAV and filter monitoring within HVAC systems	• Low pressure MEMS transducer technology and CMOS mixed signal processing technology • Pressure and temperature compensated with high accuracy and repeatability	• Accurate, reliable and repeatable operation over the life of the part • The pressure sensor can be mounted directly onto a standard PCB • Compensation and calibration eliminates need for additional circuitry or separate calibration
SM7000		• Monitoring low air pressure within ventilation systems	• Low pressure MEMS transducer technology and CMOS mixed signal processing technology to produce either an analog and/or digital output fully conditioned, multi-order pressure and temperature compensated	• Accurate, reliable and repeatable operation over the life of the part • The pressure sensor can be mounted directly onto a standard PCB • Compensation and calibration eliminates need for additional circuitry or separate calibration
HCLA		• Measure low pressure properties within HVAC systems	• Miniature calibrated and temperature compensated low pressure sensors that perform precision digital signal conditioning and provide analog and digital output at the same time	• Space-saving sensor packaging for PCB-mounting and maximum OEM design flexibility • Special compensation technique to achieve very high offset stability and virtually no position sensitivity
LMI		• Monitors extremely low pressure of VAVs • Filter monitoring • Burner control and other areas of the HVAC system	• Extremely low full scale pressure range • Accuracy is a percent of reading not a percent of full scale • Provides temperature and humidity data also • I^2C output only	• High immunity to dust • Extremely high accuracy at very low pressures • Longterm stability • Small footprint and low profile for space savings
LHD		• Large dynamic range monitoring found in airflow applications within VAVs • Filter monitoring • Burner control and other areas of the HVAC system	• Extremely low full scale pressure range • Accuracy is a percent of reading not a percent of full scale • Provides temperature and humidity data also • I^2C output only	• High immunity to dust • Extremely high accuracy at very low pressures • Low profile surface

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