

# Amphenol Sensors

Connecting your world through  
Sensing Innovations

## Industrial HVACR

Amphenol Sensors is a leading innovator in sensing technologies and measurement solutions. Offering the most diverse sensor portfolio of standard and customized products for the world's most demanding regulatory and industry-driven applications, Amphenol creates value by providing critical information for real-time decisions.

With changes in regulations and increasing consumer emphasis on improved quality of life, the demand for more energy efficient buildings and improved air quality in the workplace has never been so important. Not to mention, growing energy costs and worsening outdoor pollution are compounding efforts by HVAC system designers to leverage sensor capabilities to make indoor environments healthy and efficient.

That is why Amphenol Sensors' extensive range of sensor solutions and capabilities are at the forefront of the HVACR industry. Our product offerings are simple to integrate and provide the very latest in sensing technology, backed by extensive engineering resources and manufacturing expertise.



# Amphenol Sensors

## Industrial HVACR Sensing Solutions

💡 Energy Efficiency

🌿 Indoor Air Quality

### Outdoor Air

- Temperature Sensors
- Gas Sensors (CO<sub>2</sub>, VOC, Flammable, Toxic)
- Humidity Sensors
- Pressure Sensors

### Air Handling Unit

- Temperature Sensors
- Gas Sensors (CO<sub>2</sub>, Refrigerant)
- Humidity Sensors
- Pressure Sensors
- Position Sensors
- Vibration Sensors

### Duct Measurement

- Temperature Sensors
- Gas Sensors (CO<sub>2</sub>)
- Humidity Sensors
- Pressure Sensors

### Filter Monitoring

- Gas Sensors (VOC)
- Pressure Sensors

### Room Monitoring

- Temperature Sensors
- Gas Sensors (CO<sub>2</sub>, VOC)
- Humidity Sensors
- Pressure Sensors

### Water Management

- Temperature Sensors
- Pressure Sensors
- Vibration Sensors
- Ultrasonic Fluid Level & Concentration Sensors

### Building Pressurization

- Pressure Sensors

### Boiler Control

- Temperature Sensors
- Pressure Sensors
- Combined Pressure & Temperature Sensors
- Vibration Sensors

### Chiller Control

- Temperature Sensors
- Pressure Sensors
- Combined Pressure & Temperature Sensors
- Vibration Sensors

## OUTDOOR AIR • DUCT MEASUREMENT ROOM & FILTER MONITORING

### Temperature Sensors

- Robust design for harsh environments
- Thermal cut-off fuses for added safety
- Customizations available



### Gas Sensors (CO<sub>2</sub>)

- OEM and sensors and transmitters
- NDIR dual and single channel technology
- Connectivity to Building Automation Systems



### Gas Sensors (VOC, Flammable and Toxic)

- Detectable gases: VOC, NO, NO<sub>2</sub>, NH<sub>3</sub>
- 1000 ppb to 1000 ppm



### Humidity Sensors

- Duct and wall-mounted transmitters
- Fully-calibrated OEM sensors
- Connectivity to building automation systems



### Pressure Sensors

- High stability, accuracy and over-pressure
- Low drift



### Ultra Low Pressure Sensors

- High sensitivity, stability and repeatability
- Compact package size



## AIR HANDLING UNIT

### Temperature Sensors

- Robust design for harsh environments
- Thermal cut-off fuses for added safety
- Customizations available



### Gas Sensors (CO<sub>2</sub>)

- Lifetime calibration
- Outputs: I<sup>2</sup>C, UART, BACnet and analog
- Combination models with CO<sub>2</sub>, humidity and temperature



### Gas Sensors (Refrigerant)

- Detectable gases: R290, NH<sub>3</sub>, R454, R32, R1234
- Outputs: Linearized and analog voltage
- 500/1000 ppm to 100% LEL



### Humidity Sensors

- Transmitters and OEM sensors
- Field replaceable sensors
- High IP rating protection



### Pressure Sensors

- Types: Absolute, vented gauge and sealed gauge
- Stainless steel, robust for harsh environments
- Pressure range: 3psi - 7500psi



### Position Sensors

- Flap motor positioning
- High accuracy (2% linearity)
- Low-cost and long life



### Vibration Sensors

- Condition monitoring for fault detection of fans and motors
- Optimized performance and equipment life



## BOILER & CHILLER CONTROL

### Temperature Sensors

- Robust design for harsh environments
- Thermal cut-off fuses for added safety
- Customizations available



### Pressure Sensors

- Types: Absolute, vented gauge and sealed gauge
- Stainless steel, robust for harsh environments
- Pressure range: 3psi - 7500psi



### Pressure Sensors

- Internal metal-to-metal sealing
- Stainless steel element with excellent long-term stability



### Combined Pressure & Temperature Sensors

- High pressure and temperature accuracy
- Compatible to all currently used coolants
- Low (up to 600psi) and high (up to 2900psi) versions available



### Vibration Sensors

- Condition monitoring for fault detection of components
- Maximizes performance and reduces downtime



## WATER MANAGEMENT

### Temperature Sensors

- Robust design for harsh environments
- Thermal cut-off fuses for added safety
- Customizations available



### Pressure Sensors

- Media compatibility
- High stability, repeatability and over-pressure



### Vibration Sensors

- Vibration monitoring of pumps with alarms
- Maintain water usage throughout buildings



### Ultrasonic Fluid Level & Concentration Sensors

- Continuous monitoring of fluid level and concentration
- 1% accuracy
- Robust, non-contact sensing with slosh and aeration filtering



## BUILDING PRESSURIZATION

### Pressure Sensors

- Differential Pressure (DP) measurement
- Duct-mounted transmitters



### Pressure Sensors

- High stability, accuracy and over-pressure
- Low drift



### Ultra Low Pressure Sensors

- High sensitivity and repeatability
- Compact package size



### Pressure Sensors

- Internal metal-to-metal sealing
- Stainless steel element with excellent long-term stability



### Pressure Sensors

- Types: Absolute, vented gauge and sealed gauge
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# Sensing Technologies

MAJOR MARKETS SERVED	Thermometrics, Inc. Temperature	Telaire Gas & Moisture	NovaSensor Pressure	Protimeter Moisture Meters	Kaye Thermal Validation	SGX Sensortech Gas	Piher Sensing Systems Position	Wilcoxon Sensing Technologies Vibration	Piezo Technologies Ultrasonic	i2s Pressure & Temperature	All Sensors Ultra Low Pressure	SSI Technologies Level, Quality & Pressure
Aerospace (Commercial)	●		●			●	●				●	●
Agriculture	●	●		●		●	●			●		●
Air Quality		●		●		●					●	●
Automotive	●	●	●			●	●			●		●
Automation	●	●					●	●			●	
Construction & Restoration				●								●
Electrification (EV/HEV)	●	●	●			●	●			●		●
Energy	●					●		●	●			
Environmental Monitoring					●	●					●	
Heavy Equipment & Off-Road (HVOR)	●		●				●			●		●
<b>HVACR</b>	●	●	●			●	●	●		●	●	●
Air Handling Unit	●	●				●	●	●				●
Boiler Control	●							●		●		●
Building Pressurization		●	●							●	●	●
Chiller Control	●							●		●		●
Duct Measurement	●	●	●								●	
Filter Monitoring		●	●			●					●	
Outdoor Air	●	●				●					●	
Room Monitoring	●	●	●			●					●	
Water Management	●		●					●				●
Industrial	●	●	●	●		●	●	●		●	●	●
Marine	●					●	●	●				●
Medical	●	●	●				●		●		●	●
Military	●		●			●	●	●	●		●	●
Non-Destructive Testing (NDT)									●			
Oil & Gas	●		●			●	●	●	●		●	●
Pharmaceutical & Biotech					●						●	●
Railway	●							●				●
Thermal Validation					●							