Amphenol Sensors

Connecting your world through
Sensor Innovations

HVAC for Medical Facilities

Amphenol Sensors is a leading innovator in sensor 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.

The demands of today's healthcare industry require not only the highest criteria in the direct care of a patient, but also the highest quality, accuracy and efficiency in those facilities that allow for that care.

Within a medical facility, the proper operation of its heating, ventilating and air conditioning (HVAC) systems also ensures proper operation of various medical support functions to provide for the health, comfort and safety of that facility's occupants, including patients, visitors, and staff.

Amphenol Sensors' diverse portfolio of world class sensor solutions touches nearly every facet of a medical facility's HVAC systems to ensure not only the utmost in conditions for patient care and recovery, but also long-term efficiency to achieve green building status.

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HVAC for Medical Facilities

Application		Solution	Technology & Features	
Carbon Dioxide (CO_2)	Fresh Air Ventilation Control	• Monitors patient/staff occupancy to ensure proper CO_2 levels • For use in temporary medical facilities with no standard Building Automation System (BAS) in place	• Dual channel automatic calibration • Outputs: 0-10 V, 0-5 V, 4-20 mA, relay, BACnet	TELAIRE
Oxygen	Inline Oxygen Measurement	• Aids patient breathing in ventilator equipment	• 0-100% volume oxygen • Wide pressure range • Realtime measurements • Linear • Low power electrochemical sensor	SGX SENSORTECH
Humidity	Humidity Control	• Prevents condensation that can cause mold growth, in addition to harmful respiratory conditions • Ensures human comfort and energy efficiency	• Accuracy options: 2%, 3%, 5% • Outputs: 0-10 V, 0-5 V, 4-20 mA • Field replaceable Relative Humidity (RH) sensor	TELAIRE
Dew Point	Absolute humidity control	• Ensure human comfort and energy efficiency • Prevent condensation	• Real-time measurements • Digital outputs • Custom package options	SGX SENSORTECH
Gas Detection	Hospital Beds and Wheelchairs	• Ensure human comfort • Prevent skin infections	• Real-time measurements • Digital outputs • Custom package options	SGX SENSORTECH
Pressure	Differential Pressure Measurement	• Negative-pressure patient isolation room monitoring	• Outputs: 0-10 V, 0-5 V, 4-20 mA • Range: 0-0.3" WC, T30 • Range: 0-0.5" WC, T10, T20 • Piezoresistive sensor • Offsets: 0, ¼, ½ span • Units: In. WC, Pa, or mm H_2O • Accuracy: ±1% of span	TELAIRE MODUS
		• Negative/Positive pressure room monitoring • Fan/filter monitoring • Sensing components for ventilators, sleep apnea, and oxygen concentrators	• ±0.5" WC and above • High volume • Accuracy: ±1.5 % of span	NOVA SENSOR ALL SENSORS an Amphenol company SSI
	Climate Control Systems	• Measures coolant pressure in HVAC systems	• Stainless steel pressure sensing element, aluminum housing, RD-connector • Pressure range: 0–10 to 0–100 bar • Temperature range: -40°C to 125°C • Outputs: LIN, PWM, analog voltage	i2s an Amphenol company
	HVAC Refrigerant	• Measures low and high pressures of HVAC refrigerant	• Stainless steel, media-isolated • 3 psi – 7500 psi • Gauge, sealed and absolute piezoresistive transducers • Output options: 5V, 4-20 mA, 4.5 V • Accuracy: 1% • Variety of ports • Harness accessories available	SSI

Application		Solution	Technology & Features	
Combined Pressure & Temperature	Climate Control Systems	• Measures pressure and temperature of coolants in HVAC systems	• Compatible to all currently used coolants (R134a, R1234yf, R744) • High temperature accuracy and fast response time • Stainless steel pressure sensing element, aluminum or steel housing, RD-connector or MQS-connector • Pressure range: 0–10 to 0–200 bar • Temperature range: -40°C to 125°C • Output: LIN	**i2s** an Amphenol company
Temperature	Equipment Temperature Conditions	• Monitors critical equipment for over-temperature conditions	• Sensing element isolated from tag • Dielectric 750 V_{AC} • Eyelets to fit M3/M4/M5 screw sizes; additional diameters available • Suitable for surface temperature measurement	THERMOMETRICS EXATHERMOMETRICS
	HVAC Systems Temperature	• Provides temperature control for nearly every aspect of a medical facility, from maintaining the air temperature in an operating room to monitoring hot water temperature supplied to restroom sinks	• Configuration: pipe clip • Designed for 250,000 thermal cycles between 25°C to 85°C • Pipe diameter range: 13-30 mm (1/2-1-1/8 in)	THERMOMETRICS EXATHERMOMETRICS
			• Configuration: integrated pipe clip • IP57 ingression protection rating • AEC Q200 REV (D) - pending • Sensing element: dielectric 750 V_{AC} • Pipe diameter range: 15-18 mm (5/8-1 in) • Self-adjusts to irregular pipe surfaces	THERMOMETRICS EXATHERMOMETRICS
			• Configuration: boiler probe • Connector series: molex minifit • Full range of TCO temperature ratings according to EN60691 • Range of connectors available	THERMOMETRICS EXATHERMOMETRICS
			• Configuration: cable probe • IP66 Rating • Long-term stability • Good thermal response time	THERMOMETRICS EXATHERMOMETRICS
	Floor Heating	• Provides uniform temperature for in-floor heating	• Various resistance values available • Various lead lengths available	THERMOMETRICS EXATHERMOMETRICS
	Air Conditioning	• Directly measures object temperature for automatic adjustments	• Auto control of fan and blowing rate • Long detection range (~5 M)	THERMOMETRICS EXATHERMOMETRICS
Position	Medical Equipment	• Provides position feedback for respiratory devices, prosthesis, infusion pumps, and electrophoresis devicess	• Programmable measuring angle with built-in redundancy • Truly contactless operation with no wear; maintenance free • Immunity to dust, moisture, vibration and extreme temperatures • Robust, compact, and low profile up to IP69K Protection • Absolute position feedback; position is not lost even on power loss • High resolution up to 14-bit	PIHER sensing systems
	Hospital Beds and Wheelchairs	• Provides rotary angle/position feedback for power beds and power wheelchairs		PIHER sensing systems
	HMI Controls	• Provides linear and rotary position sensing for centrifugators, X-ray and imaging systems, ventilators, patient monitor equipment, and HVACR	• Low profile • Long life • Excellent resolution and linearity	PIHER sensing systems

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