

Amphenol Sensors

Connecting your world through
Sensing Innovations

Heavy Equipment & Off Road (HVOR)

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.

Efficiency under high demand. For agriculture, farm and construction, Amphenol Sensors combines its expertise in automotive sensors with the high demands inherent of heavy equipment.

Our sensors maximize the efficiency and lifetime of your heavy equipment, which translates to improved operational costs, operator safety and environmental compliance.



Amphenol Sensors

HVOR Sensor Solutions

● Temperature
 ● Pressure
 ● Gas
 ● Humidity
 ● Dust/Particulates
 ● Position
 ● Level
 ● Combination

Fuel Handling System

- ● Fuel
- EVAP

Cabin Comfort

- Discharge Air
- Steering Wheel
- Seats
- Dewpoint
- Cabin Air Filter
- Particulate Detection
- Joystick Control Handles

Safety Systems

- Steering Wheel
- Seats
- Defog
- Battery
- Leak Detection
- Brakes
- Seatbelts
- Washer Fluid



HVAC

- Outside Air
- ● Refrigerant/Coolant
- Evaporator
- Air Quality
- Particulate Detection
- HVAC Actuator

Powertrain

- ● ● Transmission - Fluid, Oil
- Transmission - Gearbox, Park Lock, Speed
- Power Steering
- EURO-6 Urea
- Steering Angle
- Pedals

Engine Management

- ● Engine Air
- ● Engine Oil
- ● Coolant
- Intake Air
- Exhaust Gas Recirculation (EGR)
- Cylinder Head
- MAP/TMAP
- Hydraulic Fluid

After-Treatment

- Diesel Particulate Filter (DPF)
- Diesel Exhaust Fluid (DEF)

ENGINE MANAGEMENT

Temperature Sensors

- High accuracy • High stability
- Noise immune NTC option
- Fast response time • Combination sensor options



Pressure Sensors

- High accuracy • High performance
- Long-term stability • Custom options
- Suitable for ambient temperatures up to 150°C



Level, Concentration & Conductivity Sensors

- Accuracy $\pm 1\%$
- Detects proper fluid fill and contaminants



POWERTRAIN

Temperature Sensors

- High accuracy • High stability
- Customized to application
- Utilizes metallurgical bond glass-coated NTC



Pressure Sensors

- Stable and accurate • Durable
- Customizable design • Multiple output options



Position Sensors

- Non-contact inductive and hall-effect technologies
- Excellent resolution and precision
- Reliable in harsh environments
- Touchless mechanical solutions



Combined Pressure & Temperature Sensors

- High accuracy • Oil resistant
- Wide temperature range: -40°C to 150°C
- Robust against pressure spikes



SAFETY SYSTEMS

Temperature Sensors

- Fast response time • High accuracy
- High stability • Proven reliability
- Deep domain expertise • Duplicate manufacturing locations



Pressure Sensors

- High accuracy • Small size
- Long-term stability
- Diagnostic and protective features (ASIL)



Position Sensors

- Robust and reliable modular design
- Selectable working principle: Potentiometric, hall effect, reed switch



Level & Concentration Sensors

- Accuracy $\pm 2\%$
- Continuous monitoring for fluid contamination
- Programmable for irregular shape tanks



AFTER-TREATMENT

Temperature Sensors

- High accuracy • High stability
- Integral/pigtail options
- Fast response time • Right angle and straight probe options



DEF Level, Temperature & Concentration Sensors

- Accuracy $\pm 1\%$ • Continuous monitoring
- Meets EPA regulations
- Programmable for irregular shape tank



CABIN COMFORT

Temperature Sensors

- High accuracy • High stability
- Noise immune NTC option
- Moisture resistant • Fast response time



Pressure Sensors

- High performance • High accuracy
- Customizable design • Multiple output options



Gas Detection Sensors

- Detectable gases: VOC
- Compact design • Custom packaging options



Dewpoint Sensors

- PWM and Lin Bus • Custom package options
- Combined temperature measurement



Dust Particulate Sensors

- PM2.5 • Laser detection
- Fast response • High accuracy



Position Sensors

- Non-contact inductive and hall-effect technologies
- Excellent resolution and precision
- Reliable in harsh environments
- Touchless mechanical solutions



HVAC

Temperature Sensors

- High accuracy • High stability
- Noise immune NTC option
- Moisture resistant • Fast response time



Position Sensors

- Robust and reliable modular design
- Custom form-factor available
- Selectable working principle: Potentiometric, hall effect, reed switch



Pressure Sensors

- Leakproof • High accuracy
- Media compatibility



Gas Detection Sensors

- Custom packaging options
- PWM and Lin Bus
- Detectable gases: Hydrocarbons, NOX, Ammonia



Dust Particulate Sensors

- PM2.5 • Laser detection
- Custom packaging options



Combined Pressure & Temperature Sensors

- Leakproof • High accuracy
- Diagnostic and protective features (ASIL)
- Wide pressure range: 10bar to 200bar



FUEL HANDLING SYSTEM

Temperature Sensors

- High accuracy • High stability
- Integral/pigtail options
- Combination sensor options



Pressure Sensors

- High accuracy • High performance
- Long-term stability
- Custom options



Level Sensors

- Accuracy $\pm 1\%$ • Continuous monitoring
- Robust non-contacting sensors
- Slosh and aeration filtering software



Sensor 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	Exa Thermometrics Temperature
Aerospace (Commercial)	●		●			●	●				●	●	●
Agriculture	●	●		●		●	●			●		●	●
Air Quality (Indoor)	●	●	●	●		●	●	●			●	●	●
Automation	●	●					●	●			●		●
Automotive	●	●	●			●	●			●		●	●
Construction & Restoration				●								●	
Electrification (EV/HEV)	●	●	●			●	●			●		●	●
Energy	●					●		●	●				●
Environmental Monitoring					●	●					●		
HVACR	●	●	●			●	●	●		●	●	●	●
Heavy Equipment & Off-Road (HVOR)	●		●			●	●			●		●	●
After-Treatment	●											●	●
Cabin Comfort	●		●			●	●						●
Engine Management	●		●							●		●	●
Fuel Handling System	●		●							●		●	●
HVAC	●					●	●			●			●
Powertrain	●		●				●			●			●
Safety Systems	●						●			●		●	●
Industrial	●	●	●	●		●	●	●		●	●	●	●
Marine	●					●	●	●				●	
Medical	●	●	●		●		●		●		●	●	
Military	●		●			●	●	●	●		●	●	
Non-Destructive Testing (NDT)									●				
Oil & Gas	●		●			●	●	●	●		●	●	●
Pharmaceutical & Biotech					●						●	●	
Process Control	●	●	●			●	●	●		●	●	●	●
Railway	●							●				●	●
Thermal Validation					●								

**Amphenol
Sensors**

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