

# Amphenol Sensors

Connecting your world through  
Sensing Innovations

## Heavy Equipment & Off Road (HVOR)

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.

Efficiency under high demand. For agriculture, farm and construction, Amphenol Sensors combines its expertise in automotive sensing 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 Sensing 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



## 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		●		●		●					●	●
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					●						●	●
Railway	●							●	●			●
Thermal Validation					●							

**Amphenol  
Sensors**

[www.amphenolsensors.com](http://www.amphenolsensors.com)

© 2019 Amphenol Corporation. All Rights Reserved. Specifications are subject to change without notice.

Other company names and product names used in this document are the registered trademarks of their respective owners.