

# Amphenol Sensors

Connecting your world through  
Sensing Innovations

## Military Applications

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.

For Military Applications, Amphenol Sensors provides advanced engineering design and product offerings to solve diverse challenges across today's sophisticated military technologies and rugged applications. We provide sensing solutions for military aircraft, ground systems, vehicles, missiles, munitions, soldier-worn systems, unmanned systems, underwater naval applications and space satellites.



# Amphenol Sensors

## Military Sensing Solutions

### Soldier-Worn Systems

- Temperature Sensors
- Pressure Sensors



### Ground Vehicles

- Pressure Sensors
- Gas Detection Sensors
- Position Sensors
- Ultrasonic Level & Concentration Sensors
- Vibration Sensors

### Military Aircraft

- Gas Detection Sensors
- Pressure Sensors
- Vibration Sensors
- Ultrasonic Level Sensors



### Missiles • Munitions • Torpedoes

- Temperature Sensors
- Pressure Sensors
- Gas Detection Sensors
- Shock & G Sensors

### Naval

- Vibration Sensors



### Space

- Temperature Sensors
- Pressure Sensors

## SOLDIER-WORN SYSTEMS

### Temperature Sensors

#### Applications: Various

- High accuracy • Proven reliability
- Various temperature and resistance values



### Pressure Sensors

#### Application: Blast gauge

- High stability • Miniature size
- Low power requirements • Board-mounted



## GROUND VEHICLES

### Pressure Sensors

#### Applications: Engine fuel and air filter, transmission fluid

- High accuracy • Harsh media compatibility



### Gas Detection Sensors

#### Application: Fuel leakage

- 0 to 100% LEL • Approved EX-d
- Mechanically robust



### Position Sensors

#### Application: Multi-turn steering wheel angle

- Patented through-hole solution
- Long life for harsh environments



### Ultrasonic Level & Concentration Sensors

#### Applications: Fuel, coolant, hydraulic fluid, DEF SCR systems

- Continuous monitoring •  $\pm 1\%$  accuracy
- Robust, non-contact sensing

#### Applications: Wheel speed, engine speed and position

- Variable reluctance, active hall effect or magneto resistive sensors • Zero speed, large air gap capability



### Vibration Sensors

#### Application: Vibration HUMS

- Rugged • Reliable • Durable
- Condition-based maintenance of vibrating / rotating parts



## MISSILES • MUNITIONS • TORPEDOES

### Temperature Sensors

#### Applications: Torpedo guidance and tracking

- High accuracy • Proven reliability
- Various temperature and resistance values



### Pressure Sensors

#### Application: Torpedoes

- Calibrated  $-55^{\circ}\text{C}$  to  $200^{\circ}\text{C}$
- Robust and rugged • Long-term stability



### Gas Detection Sensors

#### Application: Fuel leakage

- 0 to 100% LEL • Approved EX-d
- Mechanically robust



### Shock & G Sensors

#### Applications: Fuzing and alarming

- Accelerometers
- Rugged • Reliable • Durable



## MILITARY AIRCRAFT

### Gas Detection Sensors

#### Application: Jet fuel leakage

- 0 to 100% LEL • Approved EX-d
- Mechanically robust



### Ultra Low Pressure Sensors

#### Applications: Test/simulation, unmanned aerial vehicles (UAV)

- High stability • High repeatability
- Total error band • Compact size



#### Applications: General military grade and barometric pressure

- Calibrated  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  • High stability and repeatability
- Digital and amplified outputs

### Vibration Sensors

#### Application: Vibration HUMS

- Rugged • Reliable • Durable
- Condition-based maintenance of vibrating / rotating parts



### Ultrasonic Level Sensors

#### Applications: Fuel, coolant, hydraulic fluid, DEF SCR systems

- Continuous monitoring •  $\pm 1\%$  accuracy
- Robust, non-contact sensing



#### Applications: Helicopter landing gear and fuel systems

- Absolute, gauge and sealed gauge
- From 3 psi to 7500 psi •  $\pm 1\%$  accuracy

## NAVAL

### Vibration Sensors

#### Applications: Underwater acoustics, ordinance monitoring

- Ultra low-noise internal amplifier
- Encapsulated in polyurethane



#### Application: Underwater

- High pressure rating • High sensitivity
- Wide frequency range
- Ground isolated to eliminate ground loops

#### Applications: Towed arrays, sonobuoys, deep ocean

- Incorporates low-noise preamplifier with calibration circuit
- Electrostatically shielded and molded in polyurethane

#### Applications: Underwater unmanned vehicles (UUV), towed arrays, ACOMM

- 4-channel combination: Orthogonal axis accelerometers and omnidirectional hydrophone • Improved signal-to-noise ratio

## SPACE

### Temperature Sensors

#### Application: Atomic clock

- Long-term stability • Proven reliability
- All definitions and test methods per MIL-PRF-23648



### Pressure Sensors

#### Application: Satellite propulsion

- Robust and rugged • Long-term stability
- High repeatability • High accuracy



## 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 (HVO)	•		•				•			•		•
HVACR	•	•	•			•	•	•		•	•	•
Industrial	•	•	•	•		•	•	•		•	•	•
Marine	•					•	•	•				•
Medical	•	•	•		•		•		•		•	•
<b>MILITARY</b>	•		•			•	•	•	•		•	•
Ground Vehicles			•			•	•	•				•
Military Aircraft						•		•			•	•
Missiles • Munitions • Torpedoes	•		•			•		•				
Naval								•				
Space	•		•									
Soldier-Worn Systems	•		•									
Non-Destructive Testing (NDT)									•			
Oil & Gas	•		•			•	•	•	•		•	•
Pharmaceutical & Biotech					•						•	•
Railway	•							•				•
Thermal Validation					•							

**Amphenol  
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