Amphenol Sensors

Connecting your world through Sensor Innovations

Military Applications

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.

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 sensor solutions for military aircraft, ground systems, vehicles, missiles, munitions, soldier-worn systems, unmanned systems, underwater naval applications, and space.

Amphenol Sensors

Military Sensor Solutions

Temperature • Pressure • Gas • Vibration • Position • Level • Shock & G • Force • Acoustics

Soldier-Worn Systems

- Temperature Sensors
- Pressure Sensors
- Gas Detection Sensors

Military Aircraft

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

Naval

- Vibration Sensors
- Pressure Sensors
- Microphones
- Gas Detection Sensors
- Position Sensors

Ground Vehicles

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

Missiles • Munitions • Torpedoes

- Temperature Sensors
- Pressure Sensors
- Shock and Vibration Sensors
- Vibration Sensors
- Position Sensors

Space

- Temperature Sensors
- Pressure Sensors
- Force Sensors
- Microphones
- Shock Sensors
- Vibration Sensors
- Gas Detection Sensors
- Position Sensors

NAVAL

Vibration Sensors
Application: underwater acoustics, ordinance monitoring
- Ultra low-noise internal amplifier
- Encapsulated in polyurethane

Application: underwater vibration monitoring
- 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 hydro phone
- Improved signal-to-noise ratio

Pressure Sensors
Application: measurement of dynamic pressure due to turbulent water flow or cavitation
- Integral waterproof cable hydro-tested during production
- Acceleration compensated
- Ground isolatedIntegral waterproof cable hydro-tested during production
- Acceleration compensated • Ground isolated

Position Sensors
Applications: rudder control, launch tube control, anchor control, periscope control
- Rugged design • Reliable position feedback

Gas Detection Sensors
Application: fuel leakage
- 0 to 100% LEL
- Approved EX-d • Mechanical robust

Application: detection of toxic gases
- Detectable gases: VOCs, CO_2, CO, NO_2, NH_3
- Custom & robust packaging options

GROUND VEHICLES

Pressure Sensors
Applications: engine fuel and air filter, transmission fluid, air blast measurement, underwater blast pressure measurement
- High accuracy
- Harsh media compatibility

Gas Detection Sensors
Application: fuel leakage
- 0 to 100% LEL
- Approved EX-d • Mechanical robust

Application: detection of toxic gases
- Detectable gases: VOCs, CO_2, CO, NO_2, NH_3
- Custom & robust packaging options

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 • High 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: Health and Usage Monitoring Systems (HUMS)
- Rugged • Reliable • Durable
- Condition-based maintenance of vibrating / rotating parts
- Vehicle dynamics
- NVH
- Shock measurement due to blast

Position Sensors
Applications: door control, armoured hatch control, suspension control, protective shield control, outrigger control, steering control
- Rugged design • Reliable position feedback

MILITARY AIRCRAFT

Gas Detection Sensors
Application: fuel leakage
- 0 to 100% LEL
- Approved EX-d
- Mechanical robust

Application: detection of toxic gases
- Detectable gases: VOCs, CO_2, CO, NO_2, NH_3
- Custom & robust packaging options

Ultra Low Pressure Sensors
Applications: test/simulation, unmanned aerial vehicles (UAV)
- High stability • High repeatability
- Total error band • Compact size

Application: general military grade and barometric pressure
- Calibrated -40C to +125C • High stability and repeatability
- Digital and amplified outputs

Vibration Sensors
Application: Health and Usage Monitoring Systems (HUMS)
- Rugged • Reliable • Durable
- Condition-based maintenance of vibrating / rotating parts

Ultrasonic Level Sensors
Applications: fuel, coolant, hydraulic fluid, DEF SCR systems
- Continuous monitoring • High accuracy
- Robust, non-contact sensing

Applications: helicopter landing gear and fuel systems
- Absolute, gauge and sealed gauge
- From 3 psi to 7500 psi • High accuracy

VC Flight Test Accelerometers
Applications: flutter testing, vibration and g loading during maneuvers
- From 2 g's to 200 g's

6DoF Accelerometers and Rate Measurement
Applications: aircraft, helicopter, and missile flight testing
- Acceleration from 2 g's to 500 g's
- Angular rage from 100 to 18,000 degrees per second

Position Sensors
Application: automated positioning
- Rugged design • Reliable position feedback

MISSILES • MUNITIONS • TORPEDOES

Temperature Sensors
Applications: torpedo guidance and tracking
- High accuracy • Proven reliability
- Various temperature and resistance values

Pressure Sensors
Applications: torpedoes, Air blast measurement, Underwater blast pressure measurement
- Calibrated -55C to +200C
- Robust and rugged
- Long-term stability

Gas Detection Sensors
Application: fuel leakage
- 0 to 100% LEL • Approved EX-d
- Mechanically robust

Shock and Vibration Sensors
Applications: fuzing and alarming
- Accelerometers
- Rugged • Reliable • Durable

Position Sensors
Application: accurate positioning
- Rugged design, reliable position feedback

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

Vibration Sensors
Application: vibration and shock testing of spacecraft before launch and during flight
- Hermetic and low outgassing accelerometers
- Force limited vibration testing sensors
- Shock accelerometers for explosive bolts and stage separation

High Temperature Accelerometers
Application: rocket motor testing
- Continuous vibration measurement up to 760C

Cryogenic Accelerometers
Application: cryogenic fuel system testing
- Vibration measurement capability down to -269C

Pressure Sensors
Application: combustion instability measurement
- Dynamic pressure measurement capability down to -240C for cryogenic fuel system testing
- Dynamic pressure measurement capability up to 760C for combustion instability measurement

Microphones
Application: acoustic stress testing of spacecraft before launch
- From 16 dB to 174 dB

Position Sensors
Application: unfolding control
- Rugged design, reliable position feedback

Gas Detection Sensors
Application: fuel leakage
- 0 to 100% LEL
- Approved EX-d
- Mechanical robust

Application: detection of toxic gases
- Detectable gases: VOCs, CO_2, CO, NO_2, NH_3
- Custom & robust packaging options

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

Gas Detection Sensors
Application: detection of toxic gases
- Detectable gases: VOCs, CO, NO_2, NH_3
- Custom & robust packaging options

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, Speed, Current	**Wilcoxon Sensing Technologies** Vibration	**Piezo Technologies** Ultrasonic	**i2s** Pressure & Temperature	**All Sensors** Ultra Low Pressure	**SSI Technologies** Level, Concentration, Speed & Pressure	**Exa Thermometrics** Temperature	**PCB Piezotronics** Vibration, Pressure, Force & Acoustics	**Endevco** Vibration, Pressure & MEMS	**Temposonics** Position, Velocity, Level
Aerospace (Commercial)	●		●			●	●				●	●	●	●	●	●
Agriculture	●	●		●		●	●			●	●	●	●	●		●
Air Quality (Indoor)	●	●	●	●		●	●	●			●	●	●	●		
Automation	●	●					●	●			●		●	●		●
Automotive	●	●	●			●	●			●		●	●	●	●	●
Construction & Restoration				●								●		●		●
Vehicle Electrification	●	●	●			●	●			●		●	●	●	●	●
Energy	●					●		●	●		●		●	●		●
Environmental Monitoring					●	●					●					●
Heavy Vehicle & Off-Road (HVOR)	●		●			●	●			●		●	●	●	●	●
HVACR	●	●	●			●	●	●		●	●	●	●	●		
Industrial	●	●	●	●		●	●	●		●	●	●	●	●		●
Marine	●					●	●	●			●	●		●		●
Medical	●	●	●		●	●	●		●		●	●				●
MILITARY	●		●			●	●	●	●		●	●		●	●	●
Ground Vehicles			●			●	●	●				●		●	●	●
Military Aircraft						●		●			●	●		●	●	●
Missiles, Munitions, Torpedoes	●		●			●		●			●			●	●	●
Naval						●		●						●		●
Space	●		●			●								●	●	●
Soldier-worn System	●		●			●										
Non-Destructive Testing (NDT)									●							
Oil & Gas	●		●			●	●	●	●		●	●	●	●		●
Pharmaceutical & Biotech					●	●					●	●		●		●
Process Control	●	●	●			●	●	●		●	●	●	●	●		●
Railway	●					●		●			●	●	●	●	●	●
Thermal Validation					●											

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