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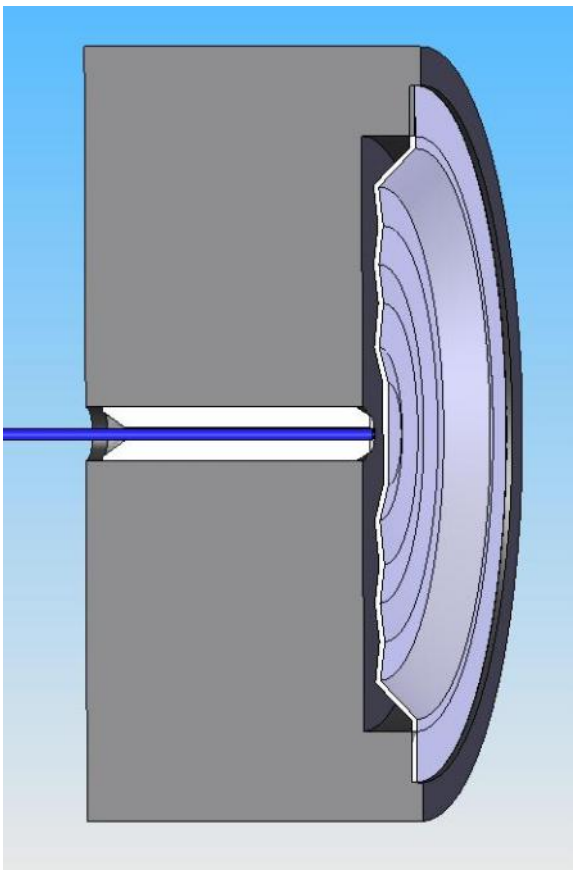
DavidsonSensors™

Fiber Optic Sensing Advantages



Davidson Fiber Optic Sensing System

- DavidsonSensors™ Measure Temperature, Pressure, Vacuum, Flow, Level, and Vibration
- DavidsonSensors™ Transmit Intrinsically Safe Signals to Passive Fiber Optic Transducers
- DavidsonSensors™ are Immune to Lightning Damage and Grounding Problems
- DavidsonSensors™ are Immune to Electromagnetic and Radio Frequency Interference (EMI/RFI)
- DavidsonSensors™ Operate at 1000°F
- DavidsonSensors™ are Easy to Install and Require Very Low Maintenance

FIBER OPTIC SENSING ADVANTAGES

Fiber optic sensing offers a number of advantages for measurement in harsh industrial environments.

Davidson fiber optic sensors used for general process control applications are intrinsically safe and immune to electromagnetic and radio frequency interference, and grounding problems. Many DavidsonSensors™ are suitable for continuous use at temperatures up to 1000°F.

Although fiber optic sensing systems can be used in almost any environment, DavidsonSensors™ offer significant technical advantages and cost savings when used in the following environments:

- **Hot and Corrosive Environments**
- **Explosion Hazardous Areas**

Davidson fiber optic sensing systems eliminate the following common instrumentation problems:

- **Failure and Drift due to Hydrogen Permeation**
- **Drift due to Fill-Fluid Leaks**
- **Failure due to Lightning Strikes**
- **Problems due to Ground Potential**
- **Noise and Interference due to EMI/RFI**
- **Nitrogen Purge Requirements**

Although DavidsonSensors™ offer significant potential cost savings through multiplexing of one signal conditioner with many measurement points, the greatest economic value is found in applications where measurements cannot be made with conventional technology.

Call Davidson to determine if fiber optic sensing can solve your most demanding measurement problems.

INDUSTRY-LEADING PERFORMANCE AND FEATURES

Davidson offers a new standard of performance for measurement in harsh industrial environments.

Davidson patented signal conditioners and pressure transducers are able to operate with high resolution, high frequency response, and/or long transmission range.

Davidson uses solid-state interferometric sensing technology with no moving parts.

Davidson signal conditioners interrogate a variety of interferometric sensors to measure temperature, pressure, vacuum, flow, specific gravity, acceleration, vibration, position, etc.

Davidson transducers and cables have no electronic components and are intrinsically safe and suitable for use even in explosive hazardous areas.

Davidson pressure transducers measure temperature as well as pressure and are able to operate continuously at temperatures of 1000°F.

Davidson transducers are constructed of Inconel alloy 718 and are tolerant to corrosion and significant over-pressure without loss of calibration.

Davidson transducers do not have isolation diaphragms, remote seals, or fill-fluids and they are immune to hydrogen migration/permeation and drift.

Davidson passive transducers do not have electrical conductors and are immune to lightning damage, grounding problems, and to electromagnetic interference (EMI/RFI).

Installation and connection of the fiber optic cabling is performed with the same equipment, tools, and methods proven in computer networks and telecommunications.

The signal conditioners are designed for low power consumption and compatibility with industrial process control systems making commissioning of the system simple and easy.

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