Austrian fiber optic pressure sensor

Overview

Your partner for sophisticated sensor solutions We offer you fiber-optic sensors and other professional sensor technology for use in a wide variety of indu.

Key Takeaways

Austrian fiber optic pressure sensors offer high-precision, robust solutions for harsh and hard-to-access environments, suitable for industrial, medical, and research applications.Overview of Austrian Suppliers

Sensorik Austria is a leading provider of fiber optic sensors in Austria, offering high-performance solutions for object detection, material recognition, and moisture measurement. Their fiber optic technology allows sensors to operate in extreme conditions, including high temperatures, heavy contamination, and potentially explosive environments (ATEX), with fiber lengths up to 25 meters for remote sensing applications . These sensors are ideal where conventional electronics cannot function reliably. Farnell Austria distributes a variety of fiber optic sensors, including pressure sensors for oil-pressure applications and capacitive sensors for liquids. They provide fast delivery, datasheets, and technical support for industrial and HVACR applications .

Technical Features

Fiber optic pressure sensors, such as those offered by Althen and Luna Innovations, provide several advantages:

• High precision and stability: Accurate measurements in extreme temperatures, corrosive environments, and EMI-prone areas .

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• Long-distance signal transmission: Optical fibers maintain signal integrity over long distances without degradation .

• Non-conductive and safe: Suitable for explosive or high-voltage environments .

• Flexible installation: Lightweight and adaptable for tight or hard-to-access spaces .

• Advanced sensing technology: Luna's os9100 series uses Fiber Bragg Grating (FBG) technology, capable of measuring minute pressure changes, strain, temperature, displacement, and acceleration, with pressure ranges from -3,000 to 13,000 Pa and resolutions down to 2 Pa .

Applications

Austrian fiber optic pressure sensors are used in:

• Industrial automation: Monitoring pressure in machinery and production lines.

• Medical and life sciences: Precise pressure measurement in research and clinical devices .

• Energy and aerospace: Reliable performance in harsh, high-temperature, or EMI-prone environments .

• Research and development: Integration into sensor networks for multi-parameter monitoring, including strain and temperature .

Integration and Software

Many sensors, such as Luna's os9100, are compatible with software platforms like ENLIGHT Sensing Analysis Software and support APIs for LabVIEW, Python, Matlab, C++, and C#, enabling seamless integration into existing data acquisition systems .

Conclusion

For applications requiring robust, precise, and flexible pressure measurement, Austrian fiber optic sensors from suppliers like Sensorik Austria and distributors like Farnell Austria provide reliable solutions. Advanced FBG-based sensors, such as Luna's os9100, offer ultra-sensitive measurements and multi-parameter monitoring, making them suitable for industrial, medical, and research environments where traditional sensors may fail .

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The measurement of pressure by using distributed optical fiber sensors has represented a challenge for many years.

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A novel fiber-optic pressure sensor based on Vernier-enhanced parallel microbubble Fabry-Perot interferometers

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Highlights • Polymer optical fiber with exceptionally low Young''s modulus and high strain limit. • Thermal and

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Pressure Sensing

Fiber optic pressure sensing as turn-key solution. The fiber optic pressure sensor is a medium range hydrostatic pressure /

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Our Fiber optic pressure sensors are engineered to meet the demands of complex and challenging environments. These sensors are

Products

Here we showcase some of our special sensor projects that will present our capabilities, the unique blend of engineering talent, fiber

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