High-performance fiber optic grating demodulator

Overview

It uses a scanning narrow-band semiconductor laser as light source to perform high-resolution fiber grating demodulation in the range of 40nm. This product is a High-Speed/High-Frequency FBG Demodulator manufactured by Beijing Dacheng Yongsheng Technology Co. This interrogator is compatible with all specifications and models of OFSCN® FBG sensors (including Temperature, Stress, and Strain FBG sensors). In this paper, a novel demodulation algorithm based on the variable-step-size method and cross-correlation algorithm is proposed to demodulate the wavelength of an FBG. In all these applications, a way to discriminator with poor characteristics. Here, we present a simple, compact, and robust technique featuring high linearity over. A high-performance, low-cost demodulation system is essential for fiber-optic sensor-based measurement applications.

High-performance fiber optic grating demodulator

The OFSCN® Fiber Bragg Grating Interrogator is an industrial-grade demodulation unit designed to provide high-precision wavelength measurements for various fiber optic sensing ...

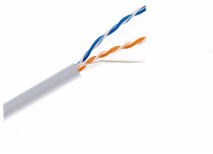
It uses a scanning narrow-band semiconductor laser as light source to perform high-resolution fiber grating demodulation in the range of 40nm. It is designed for static FBG measurement and can be ...

A high-performance, low-cost demodulation system is essential for fiber-optic sensor-based measurement applications. This paper presents a demodulation system for FBG sensors ...

It has high temperature measurement accuracy, short response time, anti-electromagnetic interference, electrical insulation, and intrinsic safety. It has the characteristics of explosion-proof, so it can be ...

Overall, despite a lot of past effort, there is still a need for a simple and robust FM/PM demodulation scheme that can achieve linear, wideband, and background-free operation. Here, we present a novel ...

The fiber Bragg grating sensor analyzer is suitable for signal demodulation and sensor data acquisition of fiber grating temperature, strain, pressure, displacement and other types of fiber grating sensors.



The OFSCN® Fiber Bragg Grating Interrogator is an industrial ...

In this article, a tracking-based high-speed demodulation method for FBG sensing systems based on the wavelength-tunable laser is proposed. The wavelength-tunable laser only ...

In this manuscript, we proposed a high-speed spectrum demodulation method with a large dynamic range for fiber-optic Fabry–Perot (F-P) sensor based on scanning laser.

Aiming at dynamic torque measurement system, fiber Bragg grating sensing principle is used to measure rotating shaft torque, and a fiber Bragg grating demodulation system based on ...

A demodulation algorithm is vital for a fiber Bragg grating (FBG) sensing system. In this paper, a novel demodulation algorithm based on the variable-step-size method and cross-correlation algorithm is ...

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