# Wind Power Fiber Optic Grating Demodulator

Various techniques have been demonstrated for optical PM/FM demodulation. They can be generally categorized as either coherent-demodulation techniques (CDT) or incoherent-demodulation ...

Here, we present a simple, compact, and robust technique featuring high linearity over a wide bandwidth and low background noise.

To perform demodulation of FBG sensors, optical fiber sensor interrogator technology has been used for many years. In this project, a low-cost self-powered interrogation system that can be simultaneously ...

The volume and mass of the fiber grating sensor are relatively small, with strong anti-interference ability, which has certain advantages in many detection methods, so this detection method is commonly ...

Data from the 5 kW wind turbine blade model in a low-temperature laboratory and the 1.5 MW full-scale field wind turbine monitoring over 1 year are used to validate the effectiveness of the ...

For the harsh operating environment of wind turbine blades and the demand for high precision in stress testing, the quasi-distributed fiber grating stress sensing system based on angle ...

Fiber optical sensors based on grating technology are considered to be the most suitable sensors for wind turbine blades, and this paper treats the two most important grating technologies, fiber-Bragg ...

On this basis, the installation position and data processing method of the sensor during blade strain measurement are analyzed as the theoretical basis for measuring the health status of ...

Provided is a fiber grating wind speed sensor demodulator which comprises a three-port optical fiber circulator, a sensor interface, a optical fiber coupler, and a photoelectric detector.

This lays the foundation for the application of weak fiber grating array strain sensing detection in wind turbine blades.

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