

This paper describes the optimal design of a miniature fiber-optic linear displacement sensor. It is characterized by its ability to measure displacements along a millimetric range with sub-micrometric ...

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The sensor uses two FBGs in a push-pull configuration for effective temperature compensation. It can be used in a large range of monitoring applications, like sustaining walls, bridge piles or buildings.

Differential intensity sensors based on optical fibers have been very successful. Nevertheless, an inefficient fiber bundle design limits their ultimate range and sensitivity. This paper ...

chieved by either beam-through or reflective techniques. A change in displacement of the through-beam and reflective sensors are manifested as a variation in the transmitted light and reflected light ...

Both sensors are able to cover a wide range of measurements from large civil structures to the smallest test applications. There are several advantages of fiber optic displacement sensing. First, several ...

Here, we present a novel sensor structure for displacement measurement. The design is based on a hole in the one fiber's core, whereas a second fiber is utilized to move inside the hole ...

A critical aspect of OFDS performance is the geometry of the fiber bundle, which influences key parameters such as sensitivity, range, and dead zones. In this work, we present a ...

It is characterised by its ability to measure the displacement along a millimetric range, with a sub-micrometric resolution. It consists of a triangular reflective grating and two fiber-optic...

Here, we present a comprehensive analytical model for multi-axis tilt sensing based on intensity-modulated optical fiber sensors (OFDSs).

This article reviews specifically the advanced fiber optic displacement sensing techniques that have been developed in the past two decades.



Fiber Optic Displacement Sensor Configuration

Web: <https://maxtools.co.za>

