Principle of Vibrating Optical Cable Segmentation

Therefore, this study proposes a method based on the broad-band phase-based video motion magnification (BPVMM) and the line tracking algorithms for the vibration measurement of ...

This paper makes the analysis of fiber optic cable tracking and positioning analysis based on distributed fiber vibration sensing.

The basic principle behind the DFOS is that cable conditions such as a change of strain or temperature on the cable can influence the properties of the light signal traveling through an optical fiber.

The vibration area localization model for underground power optical cables in multiple laying scenarios requires not only locating vibration areas but also generating laying scenario labels.

The invention discloses a positioning device for optical cable vibration, which comprises: the system comprises a first optical pulse transmitter, a second optical pulse transmitter, a first wavelength ...

Abstract: As the most common member of the underground pipeline, optical cable has already spread throughout the urban region. By combining the distributed acoustic sensing (DAS) ...

To solve the above problems, we propose a method for vibration area localization and event recognition of the underground power optical cable based on PGSD-YOLO and 1DCNN ...

External vibrations alter the fiber"s optical parameters, generating detectable phase and intensity variation in the back-scattered signal. Analysis of these change patterns enables simultaneous ...

Distributed fiber optic vibration/acoustic sensing technology utilizes the Rayleigh back-scattered light generated by periodically injecting laser pulses into fiber under test (FUT) to achieve ...

In this study, a state-of-the-art method based on modified convolutional neural network semantic image segmentation, which is compatible with extensively varying real-world backgrounds, is presented for ...

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