

What is Fiber Optic Gyroscope ?

Fiber Optic Gyroscope (FOG) senses changes in orientation using the Sagnac effect, its principle of operation is instead based on the interference of light which has passed through a coil of optical fibre, which can be as long as 5 km.

FOG provides extremely precise rotational rate information, in part because of its lack of cross-axis sensitivity to vibration, acceleration, and shock. Unlike the classic spinning-mass gyroscope, the FOG has no moving parts and doesn't rely on inertial resistance to movement. Hence, this is one alternative to the mechanical gyroscope. Because of their intrinsic reliability, FOGs are used for high performance space applications.

SkyMEMS Single Axis Fiber Optic Gyroscope is designed for fast, accurate navigation and gyrocompassing, and low noise line-of-sight stabilization. SkyMEMS Fiber Optic Gyro features fully-integrated optics and electronics, and is a superior device in regards to low weight and form-factor for tactical applications. Its advanced integrated optics and closed-loop Digital Signal Processing (DSP) delivers much higher accuracy, lower noise, and greater efficiency than competing technologies. The integrated DSP also improves optical drift stability, environmental flexibility and increases linearity.

SkyMEMS FOGs are setting the new benchmark for tactical and navigational grade gyros for a wide variety of guidance, navigation and aeronautics applications. SkyMEMS FOG is the Right choice when selecting a precision solid-state gyroscope component for tactical grade applications.

Applications of Fiber Optic Gyroscope

SkyMEMS Single Axis Fiber Optic Gyroscope is specially designed for drilling applications, it enjoys high reliability, high stability in harsh environment, which has been widely used in the following fields:

- Offshore Drilling Platform
- Oil Drilling
- Deep Hole Drilling