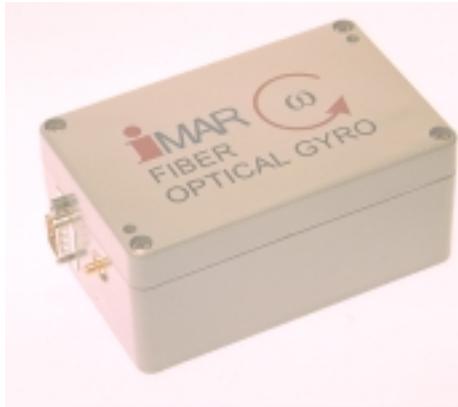


iOLFOG

Fiber Optical Angular Rate Sensor

The series iOLFOG angular rate sensor is realized as open-loop fiber optical gyroscope measuring rotation rate with high precision. Compared to other gyroscopes the optical gyroscope has the advantage of very short reaction time, high resolution, acceleration insensitivity and unsurpassed robustness.



The iOLFOG contains the fiber optical sensing unit followed by analog signal processing. The output delivers an analog output signal proportional to angular velocity. Uncompensated the very reproducible nonlinearity is below 2.5% f.s (range 200 °/s) and below 1.0 % f.s. (range 100 °/s). With external polynomial correction of 3rd order this nonlinearity is reduced to less than 0.2% f.s. Using the In-Line Spliceless Technology with a 40 µm polarization maintaining fiber proven since years in

civil and military applications iMAR manufactures an advanced gyro electronics to achieve best performance. The special design of the iOLFOG enables iMAR tailoring the parameters of the gyros to individual customer's needs if necessary. Also, manufacturing in custom specific small or medium sized lots is possible. In summary the iOLFOG is created as a "plug & measure" angular rate sensor of the medium precision class for easy handling.

Typical technical data of the fiber optical gyro:

Measuring range:	± 200 deg/s (optional 40 to 700 deg/s, other on request)
Output signal:	± 5 V
Frequency response:	0 to 100 Hz (50...500 Hz optional)
Bias stability:	< 160 µV
Resolution:	< 50 µV
Noise:	< 100 µV/√Hz
Linearity error, scale factor stability:	< 0.2 % (external polynomial corrected, const temp.)
Cross sensitivity to acceleration:	none
Temperature sensor:	optional (analog output, 10 mV/K)
Build-in-test:	optional (1 TTL-Line)
Temperature range:	-30...+70 °C (operating)
Shock:	100 g, 11 ms
Mechanical dimensions:	125 x 80 x 57 mm (single supply) Ø 70 mm x 45 mm (triple supply)
Power supply:	9...18 V or optional 18...36 V, P < 1.8 W (in OEM-Small-Package: +5V, P < 1.1 W)
Signal and power connector:	SMB and 9-pin SUB-D (in OEM-Small-Package: cable)



Don't hesitate to visit our internet home page for more information about our activities, experience and references in inertial measuring, navigation and control. Please feel free to contact us for further information on measuring, automation and control systems.

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