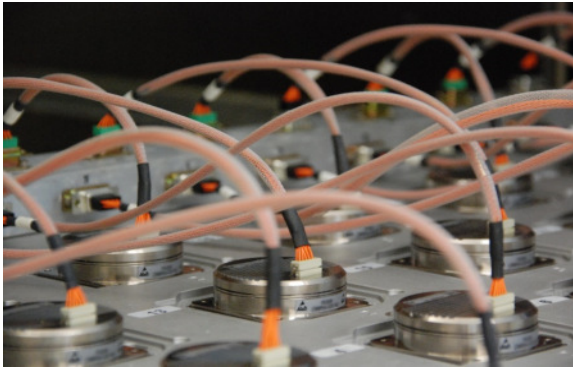




INTRODUCING THE FOG Family

Patria Netherlands, Components and Parts Specialist for civil and military Aircraft and Helicopters, is manufacturer of Fiber Optic Gyroscopes, small, palm of the hand-sized angular rate sensors. They provide the turn rate of one rotational axis. The FOGs are a Fiber Optic Block including sensor electronics. The conception of the FOGs allows for a variety of different customer setups in single or multiple axis configuration.



APPLICATION FIELDS

AHRS large commercial aircraft, ground vehicles, robots, optics or RF antenna stabilization, training simulator stabilization and many more.

KEY FEATURES AND BENEFITS

- Fiber optic technology with no moving parts
- Analogue voltage output
- Modular design adaptable for 2 and 3 axis units
- Robust design
- High reliability
- Short initialization time

ROTATION RATE OPTIONS

The modular design of the fiber optic gyroscope enables tuning of specifications to customer specific applications, e.g. dynamic range, bandwidth, bias-stability, noise and physical/environmental specifications.

GENERAL SPECIFICATIONS	FOG60	FOG70	FOG80N
Measuring Range	± 300 °/sec (Standard)	± 300 °/sec (Standard)	± 300 °/sec (Standard)
Bias Setting, Full Temperature Range	± 200 °/hr	± 200 °/hr	± 200 °/hr
Bias Repeatability 1σ, Full Temperature Range	≤ 15 °/hr	≤ 15 °/hr	≤ 5 °/hr
Stability @ Room Temperature 1)	≤ 1 °/hr	≤ 0.5 °/hr	≤ 0.2 °/hr
Scale Factor (SKF) @ Room Temperature	(-24 ± 2) mV/°/sec	(-24 ± 2) mV/°/sec	(-28 ± 2) mV/°/sec
SKF Repeatability 1σ, Full Temperature Range	0.002	0.002	0.002
Temp.-Co. (TC) of SKF, Mean Average	-0.028 % / K (typical)	-0.028 % / K (typical)	-0.028 % / K (typical)
SKF Sensitivity, Full Temperature Range	~ 0 ... - 0.05 % / K	~ 0 ... - 0.05 % / K	~ 0 ... - 0.05 % / K
Noise, Angle Random Walk 1)	≤ 6 °/hr / √Hz (0.1 °/√hr)	≤ 6 °/hr / √Hz (0.05 °/√hr)	≤ 6 °/hr / √Hz (0.03 °/√hr)
Frequency Range	0 ... 125 Hz (Standard)	0 ... 125 Hz (Standard)	0 ... 125 Hz (Standard)
Run-up Time	< 0.5 sec	< 0.5 sec	< 0.5 sec
Misalignment of Sensitive Axis	< 5 mrad	< 5 mrad	< 5 mrad
MTBF	> 40,000 hrs @ R.T.	> 40,000 hrs @ R.T.	> 40,000 hrs @ R.T.

1) Bias stability and Angle Random Walk determined by Allan variance method. Parameters denoted as "Standard" can be changed on request within certain limits.

PHYSICAL SPECIFICATIONS	FOG60	FOG70	FOG80N
MECHANICAL			
Mass	85 g	85 g	90 g
Dimensions	60 x 60 x 19.5 mm	60 x 60 x 19.5 mm	60 x 60 x 19.5 mm
ELECTRICAL			
Supply Voltage	+ 5 VDC ± 5 %	+ 5 VDC ± 5 %	+ 5 VDC ± 5 %
Supply Current	< 200 mA	< 200 mA	< 200 mA
Rate Signal Analogue Output	Differential, Rate_P / Rate_N	Differential, Rate_P / Rate_N	Differential, Rate_P / Rate_N
Output Load	R(L) ≥ 10 kOhm, C(L) < 0.5 nF	R(L) ≥ 10 kOhm, C(L) < 0.5 nF	R(L) ≥ 10 kOhm, C(L) < 0.5 nF
Signal GND Isolation from Case	≥ 10 Mohm	≥ 10 Mohm	≥ 10 Mohm

ENVIRONMENTAL SPECIFICATIONS	FOG60	FOG70	FOG80N
Operating Temperature Range	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C
Storage Temperature Range	-54 °C to +80 °C	-54 °C to +80 °C	-54 °C to +80 °C
Vibration, 20 Hz to 2 kHz	10 G (rms)	10 G (rms)	10 G (rms)
Shock 0.5 msec, Half Sine	500 G (rms)	500 G (rms)	500 G (rms)

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