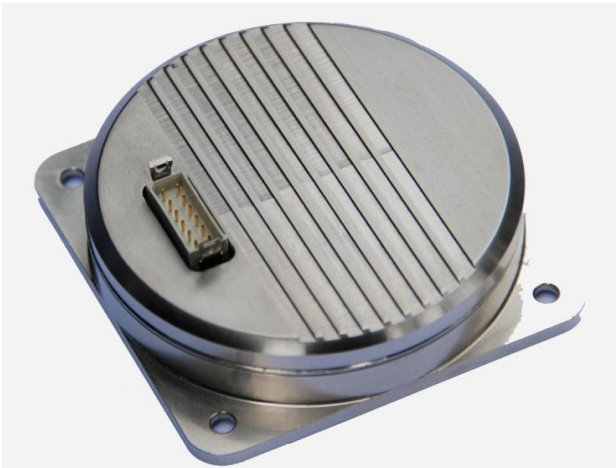


INTRODUCING THE NEDAERO FOG

NEDAERO, Components and Parts Specialist for civil and military Aircraft and Helicopters, is the manufacturer of the Fiber Optic Gyroscope FOG80, a small, palm of the hand-sized angular rate sensor. It provides the turn rate of one rotational axis. The FOG80 is a Fiber Optic Block including sensor electronics. The conception of the FOG80 allows for a variety of different customer setups in single or multiple axis configuration.



MODEL

Rotation Rate Sensor FOG80

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
- ⊕ High reliability
- ⊕ Short initialization time
- ⊕ Analogue voltage output
- ⊕ Modular design adaptable for 2 and 3 axis units
- ⊕ Robust design

SELECTION OPTIONS

- ⊕ With or without metallic cover
- ⊕ Surface treatments: chromated, anodized, nickel plated
- ⊕ Low-noise, improved noise parameters:
ARW optimized by ~15-20%

GENERAL SPECIFICATIONS

Measuring Range	± 300 °/sec (Standard)
Bias Setting, Full Temperature Range	± 144 °/hr
Bias Repeatability 1σ, Full Temperature Range	≤ 7.2 °/hr
Stability @ Room Temperature 1) 0.1 °/hr Typical	≤ 0.2 °/hr
Scale Factor (SKF) @ Room Temperature	(-24 ± 2) mV/°/sec
SKF Repeatability 1σ, Full Temperature Range	0.002
Temp.-Co. (TC) of SKF, Mean Average	-0.028 % / K (typical)
SKF Sensitivity, Full Temperature Range	~ 0 ... - 0.05 % / K
Noise, Angle Random Walk 1) Typ.3	≤ 6 °/hr / √Hz (0.1 °/√hr)
Frequency Range	0 ... 450 Hz (Standard)
Run-up Time	< 0.5 sec
Misalignment of Sensitive Axis	< 5 mrad
MTBF	> 50,000 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

Mechanical

Mass	150 g
Dimensions	80 x 80 x 20 mm

Electrical

Supply Voltage	+ 5 VDC ± 5 %
Supply Current	< 200 mA
Rate Signal Analogue Output	Differential, Rate_P / Rate_N
Output Load	R(L) ≥ 10 kOhm, C(L) < 0.5 nF
Signal GND Isolation from Case	≥ 10 Mohm

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature Range	-40 °C to +70 °C
Storage Temperature Range	-54 °C to +80 °C
Vibration, 10 Hz to 2 kHz -60 min	10 G (rms)
Shock 0.5 msec, Half Sine	500 G (rms)

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.