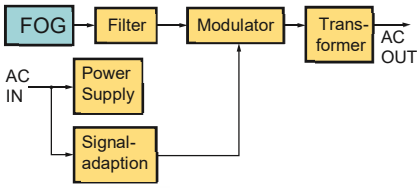
FIBER OPTIC GYRO
8088 000-179 GRG5 REPLACEMENT

The mechanical GRG5 gyro alternative. Backed up by over 50-years' experience in inertial sensors.

Design
This FOG is designed as replacement for the mechanical GRG5 gyro used in a number of different military applications. It is the only available GRG5 replacement based on fiber optic gyro technology. It includes electronics to simulate the AC/AC function of a mechanical rate gyro.

Operation
A Fiber Optic Gyro is based on the Sagnac effect. The time for light to travel in a coil is dependent of the rotation of the coil. In a ring fiber optic gyro light is divided into two beams entering a fiber coil in opposite directions. After exiting the coil the two beams are combined in a coupler and a phase difference proportional to the rate of rotation is measured.
In this gyro the additional electronics is added still within the small size of the GRG5 gyro.

A block schematic of the AC/AC function is shown below.



Applications
- Gun stabilization
- Sight stabilization
- Antenna stabilization

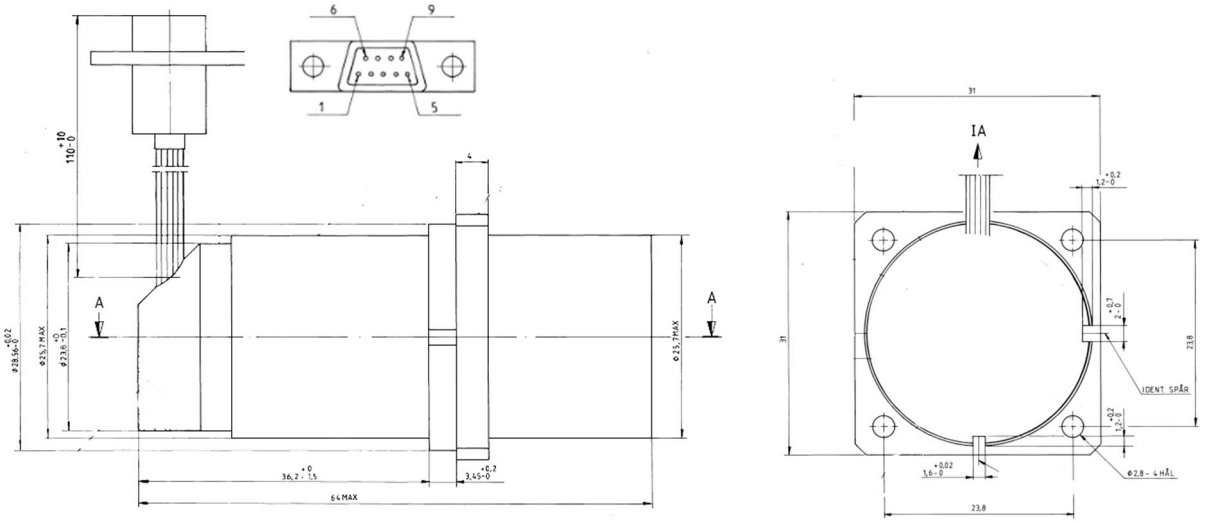
Features
- Solid state
- Low drift
- High shock usability
- Small size
- Short start time
- Soundless operation
- Short start-up time
- Non ITAR

Company Background
Saab has been a producer of gyros of various designs for over 50 years. Production was initially intended for Saab designed aircraft sight and missile requirements.

Since the end of 70´s, the gyro production have expanded into a product line of its own including design and production of gyro products for worldwide customers. Up to the present time, we have produced more than 50.000 sensors. Gyros based on FOG technology has been the main product since the end of 90´s.

Mechanical Gyros.

DIMENSIONAL DRAWING 8088 000-179



SPECIFICATION VERSION 8088 000-179

CHARACTERISTICS	UNIT	VALUE
Range	°/s	60
Bias Over Temperature Range	°/s max	0,3
Scale factor @±30°/s	mVACrms°/s	30.0
Scale factor error Over Temperature Range	%	±1
Non-linearity 0-60 °/s	%	±1.0
Start-up time	sec max	1
Natural Frequency -90 degree	Hz min	50
Built In Test Option		
Weight	grams max	160
Output load	kΩ	10
POWER REQUIREMENTS		
Voltage, supply I	VAC 400 Hz rms	+26
Voltage, supply II – pickoff	VAC 400 Hz rms	+26[1]
ENVIRONMENTS		
Shock	g : msec	500 : 1
Vibration, sine	g : Hz	10 : 60-2000
Vibration, random	g^2/Hz : Hz	0,09 : 60-2000
Operating temperature range (OTR)	ºC	-35 to +65
Storage temperature range	ºC	-40 to +75

[1] Reference for output

Specifications subject to change without notice

March 2022

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