

# FMU SERIES

## FIBER OPTIC GYRO INERTIAL MEASUREMENT UNITS

- Equipped with high-performance closed-loop FOG & MEMS accelerometers
- Very large FOG bandwidth
- Long usage & shelf life
- Flexible & reliable
- Low life cycle cost
- Compliant with civilian aviation certifications

# FMU series

## FOG Inertial Measurement Units

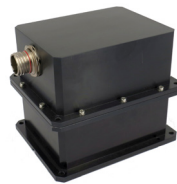
Capitalizing on Safran Electronics & Defense's 60-year experience in inertial systems, these units are equipped with Fiber Optic Gyro (FOG) technology and servo-looped MEMS accelerometers.

FMUs, as well as their packaged versions, are particularly designed for civil and industrial applications which need a combination of very high reliability, excellent signal stability and very low noise.



### Applications

- Geo-localization
- Guidance, navigation & control
- Attitude & heading reference systems
- Helicopter autopilots
- Automatic flight control systems
- Industrial & robotics
- Etc.



All FMUs can be delivered in a packaged version.

### Technical specifications

#### Accelerometers\*

- Measurement range (g): 5
- Bias (OTR<sup>(1)</sup>, mg): <1
- In run stability (µg, 1 hour): <250
- Scale factor accuracy (OTR<sup>(1)</sup>, ppm): <3,000
- Scale factor non linearity (ppm of input): <2,000
- Noise (mg/√Hz): 0.05
- Bandwidth (Hz): 50

#### General

- Output type: RS422 / up to 2,000 Hz
- Built In Test: Yes
- Operating temperature: -40°C to +71°C
- Storage temperature: -55°C to +85°C
- Acceleration sensitivity: negligible
- Random vibrations (g rms 20 to 2,000 Hz): 6.3
- Shock (g, half sine, 6ms): 30

\*Accelerometers with higher accuracy are also available for FMU-300 and FMU-500

Gyro	FMU-100	FMU-200	FMU-300	FMU-500
Measurement range (°/sec)	450	450	450	450
Bias (OTR <sup>(1)</sup> , °/h)	3	1	0.7	0.3
In run stability (°/h, 10 min)	1	0.5	0.3	0.1
Scale factor accuracy (OTR <sup>(1)</sup> , ppm)	500	500	200	100
Scale factor non linearity (ppm)	250	250	150	50
Noise (°/h/√Hz)	25	12	1.7	0.85
Angle random walk (°/√h)	0.3	0.14	0.02	0.01
Bandwidth (Hz)	> 500	> 500	> 500	> 500
Power supply (Vdc)	+/-15, +5	+/-15, +5	+/-15, +5	+/-15, +5
Power consumption (W)	10...17	10...17	11...17	11...17
External dimensions (LxWxH, mm)	62 x 67 x 91	71 x 83.5 x 110	83.5 x 89 x 110	92.5 x 93 x 114
Weight (g)	700	1,000	1,300	1,400

<sup>(1)</sup> OTR: Over operating Temperature Range

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