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KILAVUZ-20

TACTICAL GRADE INERTIAL MEASUREMENT UNIT

FIBER-OPTIC GYROSCOPES
QUARTZ ACCELEROMETERS

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TACTICAL GRADE INERTIAL MEASUREMENT UNIT

Kılavuz-20 is a tactical grade inertial measurement unit, which is designed and developed by ASELSAN, to be used in systems like tactical inertial navigation system, guided munition kit, EO/FLIR stabilization and in many other applications.

Kılavuz-20 uses fiber optic gyroscopes and quartz accelerometers for measurement of angular rate and acceleration of the platform. It has a small size, high reliability, low weight and low power consumption by using the advantages of the fiber optic technology.

Applications
- Navigation, Guidance and Control
- EO/FLIR/Camera/Radar Stabilization

Gyro Performance Specifications
- Measurement Range : ±450 °/s (configurable up to ±1000 °/s)
- Angular Random Walk (const temp) : ≤0.05 °/√h
- Scale Factor (over temp) : ≤500 ppm (1σ)
- Misalignment (over temp) : ≤0.5 mrad (1σ)
- Bias (over temp) : ≤1 °/h (1σ)
- Bias Instability (const temp) : ≤0.5 °/h

Accelerometer Performance Specifications
- Measurement Range : ±30 g
- Velocity Random Walk (const temp) : ≤10 µg/√Hz
- Scale Factor (over temp) : ≤200 ppm (1σ)
- Misalignment (over temp) : ≤0.5 mrad (1σ)
- Bias (over temp) : 0.2 mg (1σ)
- Bias Instability (const temp) : ≤10 µg

Physical/ Electrical Specifications
- Output Data Rate : 100 Hz (inertial) / 500 Hz (flight control)
- Dimensions : 156 mm x 134 mm x 70 mm
- Weight : 1.9 kg (with isolators)
- Input Voltage : +5 VDC, ±15 VDC
- Power Consumption : 16W (at temp extreme)
- Serial Interface : RS 422, SDLC

Environmental Specifications
- Operating Temperature : -40 to +71°C
- Storage Temperature : -55 to +85°C
- Vibration (Functional) : 6 grms, 20 Hz... 2000 Hz
- Shock (Functional) : 20g 11 ms halfsine

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