KILAVUZ-30

TACTICAL GRADE INERTIAL MEASUREMENT UNIT

FIBER-OPTIC GYROSCOPES
MEMS ACCELEROMETERS

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Kılavuz-30 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-30 uses fiber optic gyroscopes and MEMS 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 MEMS and fiber optic technology.

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

Gyro Performance Specifications
- Measurement Range : ±1000 °/s
- Angular Random Walk (const temp) : ≤0.05 °/√h
- Scale Factor (over temp) : ≤100 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 : ±15 g
- Velocity Random Walk (const temp) : ≤50 µg/√Hz
- Scale Factor (over temp) : ≤200 ppm (1σ)
- Misalignment (over temp) : ≤0.5 mrad (1σ)
- Bias Repeatability (run to run) : ≤1.5 mg (1σ)
- Bias Stability (over temp, in run) : ≤150 µg (1σ)
- Bias Instability (const temp) : ≤50 µg

Physical/ Electrical Specifications
- Data Rate (UART) : Configurable up to 2Kz
- Data Rate (SDLC) : 400 Hz
- Dimensions : Ø 94 mm x 96.1 mm (with connector)
- Weight : < 0.92 kg
- Input Voltage : +5 VDC, ±15 VDC
- Power Consumption : 16W (at temp extreme)
- Serial Interface : RS 422, SDLC or UART

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

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