

LCR-350B

AHRS



This new product is an evolution of Northrop Grumman LITEF's very successful Fiber Optic Gyro based systems. The LCR-350B AHRS offers state of the art MEMS gyro and accelerometer technology from one of the leading MEMS manufacturing companies in aerospace. The LCR-350B continues the successful history of AHRS made by Northrop Grumman LITEF in Freiburg, Germany. Our exhaustive research and development has culminated in a product that delivers value to the operator due to light weight, reduced volume, outstanding HIRF robustness and unmatched performance, even in high dynamic flight profiles and under severe vibration and acoustic noise environments.

KEY FEATURES

- Meets rotary and fixed wing demands
- Directional Gyro Mode
- IRS/GNSS blended Hybrid Navigation Data

OUR SYSTEM FOR YOUR FUTURE

The LCR-350B's performance is based on unlimited attitude range and better accuracy over the entire operating spectrum, combined with precise outputs of essential attitude and heading data, body rates and body accelerations, all delivered over ARINC 429 busses. The LCR-350B provides an attractive solution for a wide variety of aircraft, from small to large sized

fixed wing airplanes and helicopters. Operated from a 28 Volt DC source, the LCR-350B eliminates heavy and troublesome inverters. It is qualified with no forced air cooling.

VERSATILITY FOR TODAY AND TOMORROW

The LCR-350B is an Attitude and Heading Reference System. Long range heading reference is provided by the LCM-300B external Magnetometer. By its 3-D calibration the magnetometer provides high accuracy heading reference even under bank angles, enabling prolonged turns on SAR operations. If available, the unit can also accept GNSS data to provide hybrid navigation data (GNSS/Inertial) with high bandwidth and low noise. The information is output to the avionics system over the ARINC429 high speed data bus. Free inertial heading or DG Mode is available to the pilots via cockpit selection to overcome local geographical anomalies seen in slaved mode.

TECHNICAL DATA LCR-350B

ATTITUDE AND HEADING REFERENCE SYSTEM

SPECIFICATIONS

Dimensions	AHRU	250 x 128 x 93 mm
Weight	AHRU	2.1 kg
Volume	AHRU	3.0 l
Power	Primary Auxiliary Load	28 V DC (nominal) 28 V DC (nominal) 18 W (incl. Magnetometer)
MTBF (calculated)	AHRU	>25,000 hours A/C + 25 °C >10,000 hours ARW + 50 °C

PERFORMANCE

Attitude	Static (straight & level flight):	0.5 deg
	Dynamic:	
	Basic Mode	2.0 deg
	Normal Mode	1.0 deg
	Hybrid (GNSS/Inertial)	0.1 deg
Mag. Heading	Slaved mode	2.0 deg
Mag. Heading	DG mode Drift	10 deg/h
True Heading	Hybrid (GNSS/Inertial)	1.0 deg
Angular Rates		0.25 deg/s
Acceleration		10 mg
Acceleration Range / Angular Rate Range		± 10 g / 499 deg/s
Output		ARINC 705-5

INTERFACES

ARINC-429

RS-422 (Magnetometer, Raw Data and Maintenance)

Discretes

CERTIFICATIONS

ETSO/TSO	C201 (A3H2H9)
DO-160-G	Temperature: -55 °C to +70 °C; 30 min short Time High +85 °C Vibration: CAT SC 4.12 grms, CAT UG Sine on Random
DO-178 C Level A	
DO-254 Level A	

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