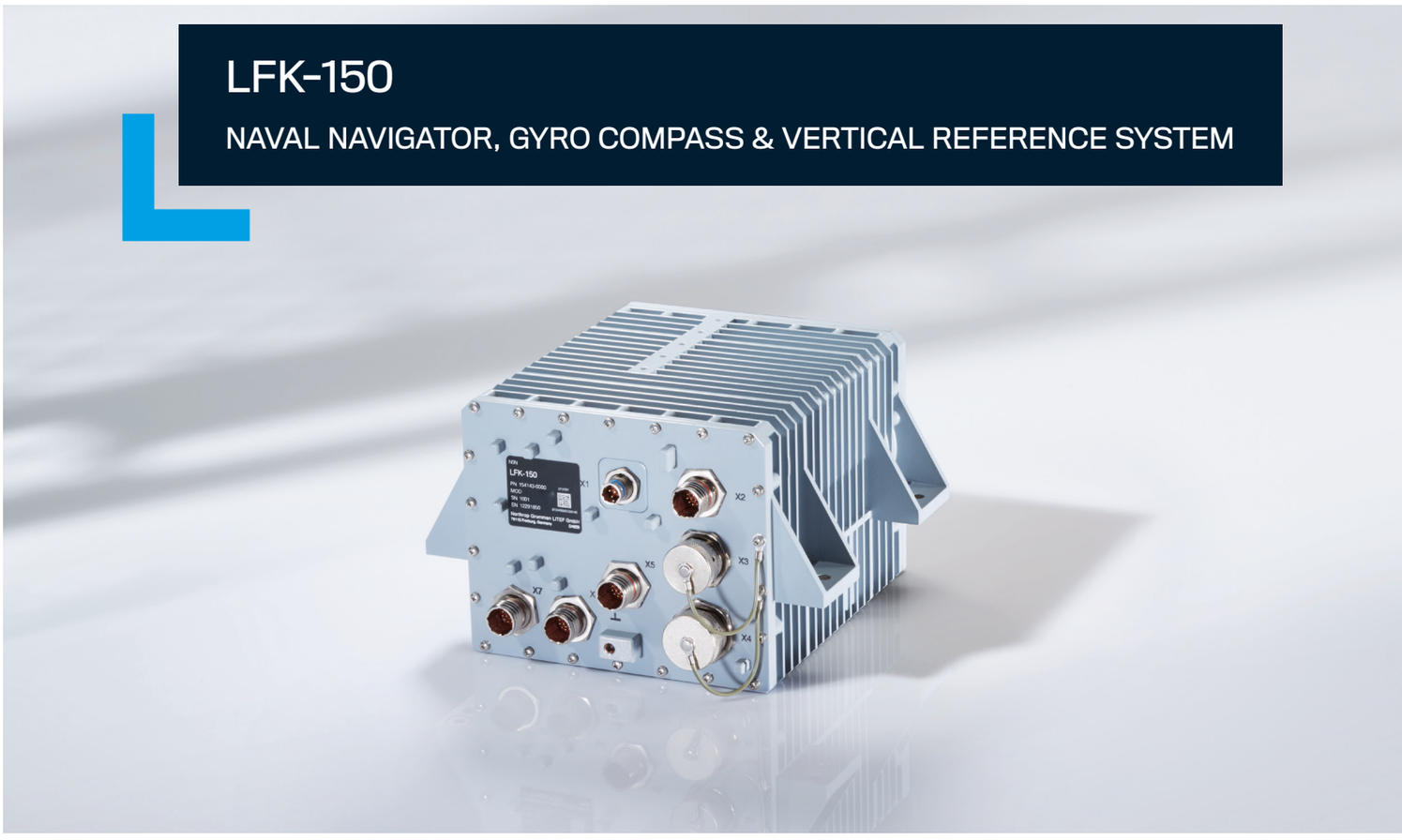
LFK-150

NAVAL NAVIGATOR, GYRO COMPASS & VERTICAL REFERENCE SYSTEM



Northrop Grumman LITEF has 60 years of experience in inertial systems technology and was the first company in the world to introduce Fiber Optic Gyroscopes (FOG) in commercial aviation systems in the 1990s.

With the next generation LFK-150, LITEF provides a naval navigator and gyro compass with vertical reference for a wide range of navigation and stabilization applications, suitably following our famous LSR-85.

Based on FOG technology combined with high accurate MEMS accelerometers the LFK-150 system performs very high speed data sampling of its inertial sensors. Optimized system design provides high accurate stabilization data with low data latency.

Short system alignment time ensures fast readiness for vessel operation.

FEATURES

- Provides inertial & hybrid position, heading, pitch/roll, angular rates, heave, acceleration and velocities
- Compensation of water current for inertial navigation (if speed log and GPS are available)
- High dynamic angular rate and body acceleration with low noise enables highly sophisticated stabilisation & positioning control laws
- Automatic operation
- Easy mounting, no special tools required
- High reliability: >100 000 hours MTBF
- Maintenance free
- German technology

OWNER'S BENEFITS

- Improves navigation performance
- Reduces system complexity for navigation and stabilization
- Reduces operator load
- Reduces integration complexity
- Reduces Life Cycle Cost
- Reduces maintenance overhead
- Reduces risk

TECHNICAL DATA LFK-150

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PERFORMANCE (RMS if not stated otherwise)			
Heading		< 0.1 ° x sec. lat.	
Roll / Pitch		< 0.03 °	
Acceleration		< 0.02 m/s²	
Angular Rates		< 150 ppm	
Heave		< 0.05 m or 5 %	
Velocities		< |Ref. velocity | + 0.05 m/s	
Geographical position		< 1 NM / 8 hr or GPS acccuracy < 2 NM / h inertial	
Alignment Time			
	- dockside	9 ... 23 minutes	(lat < 70 °)
		30 minutes	(lat < 78 °)
	- at sea	30 minutes max.	(lat < 78 °)
ELECTRICAL CHARACTERISTICS			
Supply voltage		24 VDC (IEC 60945), 18 - 32 VDC	
Power Consumption		< 28 Watt	
INTERFACES			
Interfaces (configurable)		Synchronous RS-422 serial interface with HDLC framing acc. ISO/IEC 13239 and asynchronous RS-422 acc. IEC 61162-1/-2 (NMEA) or binary protocols	
Alert Management		Asynchronous RS-422 acc. IEC 62923-2 (MSC.302(87))	
Data update rate		Selectable, max 512 Hz	
LOGISTICS			
Built-In-Test (BIT)		Power-up BIT, continuous BIT	
MTBF		> 100 000 h	
PHYSICAL CHARACTERISTICS			
Weight		6 kg / 13.3 lb., non-magnetic housing	
Dimensions L x W x H (excluding mounting flanges and connector)		220 x 180 x 147 (mm) 8.66 x 7.09 x 5.79 (inch)	
Colour		Light grey (RAL 7001, equiv. FS 36375)	
Cooling		Radiation / convention, no forced air cooling required	
ENVIRONMENTAL CONDITIONS			
Temperature range			
Operating	full performance	0 °C - + 55 °C	(MIL-STD-810G)
	reduced performance	- 15 °C - + 60 °C	(MIL-STD-810G)
Storage		- 46 °C - + 71 °C	(MIL-STD-810G)
Vibration, sinusoidal		IEC 60945	
Vibration, shipboard		MIL-STD-810G, METHOD 528, MECHANICAL VIBRATIONS OF SHIPBOARD EQUIPMENT, Procedure 1 (Type 1)	
Shock operational		20 g, 20ms	(x/y/z, MIL-STD-810G)
		+140 g, 5,2 ms/-52g, 14.1 ms	(z, MIL-STD-810G)
Waterproofness		IP-X7	(DIN EN IEC 60529)

FOR MORE INFORMATION,
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