

LCI-100N FIBER OPTIC NORTHFINDER



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 in commercial aviation systems in the 1990s. With its family of inertial measurement units (IMUs) Northrop Grumman LITEF provides the high performance and superior quality of the airborne technology to industrial customers worldwide.

The LCI-100N is a compact gyro compass unit designed for challenging applications. It consists of the newest generation of fiber optic gyroscopes (FOG), micro-electromechanical (MEMS) accelerometers providing reliable north direction independent of magnetic fields and vibration impact. With its easy to integrate mechanical and electrical interfaces the LCI-100N is the best choice for all systems requiring accurate heading and attitude data.

MAIN FEATURES

- Alignment proceeding time ≤ 5 minutes
- Analytical platform calculation
- Data output fully compensated for temperature and misalignment
- Auto-Levelling and auto-alignment features (selectable) based on a rest and motion detection
- Extensive built-in-test features
- RS-422 interface (UART and HDLC)
- German technology
- No US export restrictions apply

TYPICAL APPLICATIONS

- Navigation systems
- Heading reference for various applications:
 - Construction machines
 - Underground mining machines
 - RIG alignment
 - Autonomous vehicles
 - Remotely operated

TECHNICAL DATA LCI-100N

FIBER OPTIC NORTHFINDER

GYROCOMPASSING PERFORMANCE	
Heading Accuracy ¹⁾ 1 σ (alignment time \geq 5 minutes)	\leq 0.35 deg secant latitude
Pitch & Roll Accuracy 1 σ	\leq 0.05 deg
SYSTEM & ENVIRONMENTAL PARAMETERS	
Mass	\leq 2.5 kg / \leq 5.5 lb
Dimensions (excluding mounting flanges and connector)	\leq 100 x 130 x 160 mm ³ \leq 3.9 x 5.1 x 6.3 inch ³
Volume	\leq 2.6 liters / \leq 159 inch ³
Power Consumption	max 18 Watt, \leq 10 W typical
Supply Voltage	18.0 VDC ... 32 VDC \leq 28 VDC nominal
Interface	serial interface with RS-422 levels, either synchronous with HDLC protocol + SYNC-Pulse or asynchronous (UART) + SYNC-Pulse
Data Update Rate	10 Hz, 20 Hz, 50 Hz, 100 Hz and 200 Hz (default)
Built-In-Test	Power Up BIT, Continuous BIT
Temperature range for specified Performance - full performance - operating	- 20 °C ... + 71 °C - 40 °C ... + 71 °C
Shock - operational - non operating	6 g half-sine pulse for 20 ms single handling shock 20 g for 20 ms
Random Vibration - operational - non operating	4.1 Grms (DO-160, section 8, CAT SC) 5.8 Grms (DO-160, section 8, CAT RCI)
Electro Magnetic Compatibility	Fulfills IEC 61000-4 (2-8) and CISPR 22 requirements

¹⁾Secant latitude = 1 / cosine latitude

FOR MORE INFORMATION,
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