DRILL-PILOT® NG

INERTIAL NAVIGATION MWD SYSTEM

Northrop Grumman LITEF has 60 years of experience in design, development and manufacturing of highly reliable and safety critical inertial sensors. Our renowned systems are used to navigate aircraft, ships and other vehicles safely around the world. The same superior airborne technology has been adopted for industrial solutions fulfilling highest quality standards.

The Drill-Pilot® NG provides inertial propagated orientation and position data for Measurement-While-Drilling (MWD) and borehole inspection/survey tasks. The system is designed to be used directly behind the drill bit and allows exact measurement during the drilling process as well as short reaction times while performing steering manoeuvers. It is the preferred solution for all tasks requiring robust and accurate heading and positioning data.

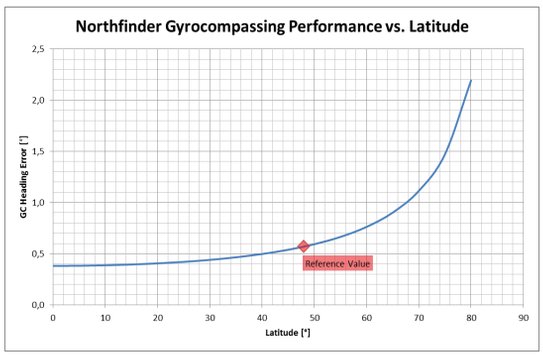
MAIN FEATURES

- High performance fiber optic gyroscopes (FOG) and micro-electromechanical (MEMS) accelerometer sensors
- Gyro compassing functionality
- Independent of magnetic interference
- No inclination range limitation
- Dead reckoning navigation platform based on external depth input
- Data output fully compensated for temperature and misalignment
- Moving / resting detection
- Extensive built-in test features

TECHNICAL DATA DRILL-PILOT® NG

INERTIAL NAVIGATION MWD SYSTEM

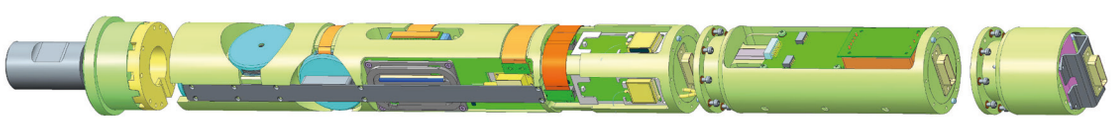
SYSTEM PERFORMANCE	
True heading gyro compass, accuracy 1 σ (alignment time 5 min	≤ 0.5 deg secant latitude [1]
Pitch & Roll accuracy 1 σ	≤ 0.5 deg
Expected Accuracy (depending on borehole profile and environmental condition)	1 % of drilling distance travelled



POWER	
Power Consumption	30 W max, ≤ 15 W typical
Inpuput Voltage Range	20 VDC ... 75 VDC (24 VDC nominal)
Battery Runtime	6 hours
Built in Test (BIT)	Power up BIT, continuous BIT

DIMENSIONS (including outer tube)

Length 750 mm / 30 ° (with mountable battery package)
Diameter ø 76 mm / 3”
Weight approx. 15 kg



ENVIRONMENTAL	
Temperature Range	- 20 °C ... + 60 °C - 20 °C ... + 71 °C (without battery)
Shock - operational - non-operating	 20 g half sine pulse for 6 ms single handling shock
Vibration - Longitudinal - Lateral	 6 Grms, 10 to 500 Hz 4 Grms, 10 to 500 Hz
Pressure Resistance	100 bar / 1500 PSI
Electro Magnetic Compatibility	Fulfills EEC / EMC, Directive 2004/108/EG

[1] Secant latitude = 1/cosine latitude

FOR MORE INFORMATION,
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