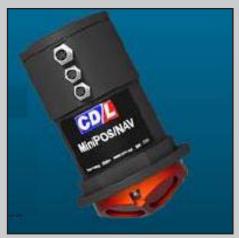
CDL MINIPOS/NAV SYSTEM



GENERAL DESCRIPTION

The CDL MiniPOS/NAV system combines CDL's MiniPOS2 inertial navigation product with RDI's DVL technology in a single housing which ensures ease of calibration and integrity of the calibration data. A combined pressure housing provides size and weight savings which makes the system easier to integrate into modern ROV spreads.

DVL aided inertial navigation allows the drift rate inherent in pure inertial navigation systems to be greatly reduced and allows the system to navigate accurately over long distances with no external position input. CDL can provide specially designed computer software which allows integration of acoustic range via USBL or LBL to allow the MiniPOS/NAV to output high update rate, high accuracy, smoothed positional information which can be used to greatly improve a wide range of subsea survey tasks.

MiniPOS/NAV uses a high grade Ring Laser Gyrocompass (RLG) which can also be aided on the surface by GPS. Two grades of RLG sensor can be fitted to allow medium or high grade positioning accuracy.

System outputs include: Heading, Pitch, Roll, Depth, X, Y and Z angular velocities, X, Y and Z linear accelarations, Heave, Surge and Sway as well as full positional information in a variety of coordinate systems.

The MiniPOS/NAV system can be preconfigured and calibrated, ready to install on client ROV and AUV systems.

FEATURES

- DVL, GPS, depth input
- WGS84 output
- Heading, Pitch and Roll o/p
- ROV and AUV navigator
 - Packaged with DVL
 - 6,000 m depth option

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TECHNICAL SPECIFICATIONS

IMU SPECIFIATION

Free inertial drift GPS and Log aiding EM log only DVL aiding Heading accuracy Pitch and roll Angular random walk Bias repeatability Scale factor repeatability Settling time Heave, surge, sway

Standard T16 IMU

Under 5 nautical miles/hour 10m CEP 0.5 nautical miles/hour 20 metres per hour CEP +/-0.169°secant latitude 0.028 degrees rms 0.02 degrees/root hour 0.1 degrees/hour 75 ppm 10 minutes 5% or 5cm

High performance T24 IMU

Under 1 nautical mile/hour 10m CEP (circular error probability) 0.2 nautical miles/hour 3 metres per hour CEP +/-0.028° secant latitude 0.028 degrees rms 0.002degrees/root hour 0.005 degrees/hour 10 ppm 30 minutes 5% or 5cm

Telemetry Interface

Bi-Directional RS422 or RS232 1 x 115kbaud 50/100Hz inertial data with fixd format 2 x up to 115kbaud, up to 50Hz ascii data with a variety of user-selectable formats Inputs for GPS, DVL and depth

Depth Rating

3,000 metres (Standard) 4,000 metres (Standard) 6,000 metres (Standard)

Power Requirements

Consumption Supply voltage AC DC Between 20 and 35W(depends on configuration) (both available as standard) 10-260Vac 20-30Vdc

Weights and Dimensions

Subsea unit Weight in air Weight in water Mounting (4 holes) 177mm dia x 268mm 9.8kg 2.33kg M10 144 x 144mm



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