

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 accelerations, 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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technology
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Accredited to BS EN ISO 9001:2000

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TECHNICAL SPECIFICATIONS

IMU SPECIFICATION

	Standard T16 IMU	High performance T24 IMU
Free inertial drift	Under 5 nautical miles/hour	Under 1 nautical mile/hour
GPS and Log aiding	10m CEP	10m CEP (circular error probability)
EM log only	0.5 nautical miles/hour	0.2 nautical miles/hour
DVL aiding	20 metres per hour CEP	3 metres per hour CEP
Heading accuracy	+/-0.169°secant latitude	+/-0.028° secant latitude
Pitch and roll	0.028 degrees rms	0.028 degrees rms
Angular random walk	0.02 degrees/root hour	0.002degrees/root hour
Bias repeatability	0.1 degrees/hour	0.005 degrees/hour
Scale factor repeatability	75 ppm	10 ppm
Settling time	10 minutes	30 minutes
Heave, surge, sway	5% or 5cm	5% or 5cm

Telemetry Interface

Bi-Directional RS422 or RS232

1 x 115kbaud 50/100Hz inertial data with fixed 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	Between 20 and 35W(depends on configuration)
Supply voltage	(both available as standard)
AC	10-260Vac
DC	20-30Vdc

Weights and Dimensions

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



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