

Teledyne CDL

# MINIPOSNAV3

## RING LASER GYRO

MiniPOSNAV3 is Teledyne CDL's highest accuracy integrated navigation solution for ROV and AUV applications, providing True North Seeking Heading, Attitude, Pitch and Roll, and DVL data. This full Inertial Navigation System (INS) operates with multiple aiding options (USBL, LBL, DVL and GPS), is hardware independent and can work with any USBL or LBL system and with a variety of topside software packages.

The MiniPOSNAV3 eliminates almost all of the inherent noise and availability issues of traditional positioning systems. Developed from the successful MiniPOSNAV, the MiniPOSNAV3 has increased accuracy capabilities, aided positioning from most subsea constructions, inspection and survey related tasks for ROV and AUVs. System options include: connectors mounted on the top or side, as well as the option to include a Valeport mini-IPS (0.01% scale factor) depth sensor.

This system can also form an integral part of a Mid Water Station Keeping System; by fusing the INS, DVL and USBL it can produce a highly stable INS solution feeding precise position, acceleration and rotation information directly to the closed loop control system on the ROV/AUV at update rates of 50Hz.



### PRODUCT FEATURES

- Full INS Capability
- Integrated RDI Navigator DVL
- RLG Optical Technology – No Moving Parts
- High Accuracy Heading, Pitch and Roll
- Low Noise, High Update Rate Solution
- USBL, LBL, GPS and DVL Aiding
- Proven Mid Water Station Keeping Capability
- Depth Options to 6000m



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Everywhereyoulook™

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## TECHNICAL SPECIFICATIONS

### Performance:

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

### Telemetry Interface:

Bi-directional RS422 or RS232  
 1 x 115kbaud 50/100Hz inertia data with fixed format  
 2 x up to 115kbaud, up to 50Hz ascii data with a variety of user-selectable formats  
 Inputs for GOS, DVL and depth  
 Depth Rating: 3000 metres (standard), 4000 – 6000 metres (options)

### Power Requirements:

Consumption	Between 20 and 35W (depends of configuration)
Supply Voltage	Both available as standard
AC	100 – 260VAC
DC	20 – 30VDC

### Weight & Dimensions:

Subsea unit	200mm dia 392mm	(8" dia x 10.6)
Weight dry	14kgs	(30)lbs
Weight in air	4kgs	(9lbs)
Mounting (4holes)	M8 152 x 152mm	(M8 6" x 6")