RTS NEMO

Main features

- All-in-one Navigation System
- Fully calibrated (one housing)
- Compact size
- Titanium housing
- iXblue and Nortek Inside®
- INS & DVL in separate watertight compartments
- Maintenance-free FOG technology
- Power drop-out protection (battery-free)
- 4000m depth rating
- Current Profiler
- Spectrum Analyzer
- Engineered for extreme reliability
- Web interface for direct control and monitoring of DVL and INS

Nemo Subsea Navigator

The RTS NEMO Subsea Navigator is a combined INS and DVL solution for water depths up to 4000m. The unit is purpose-built for ROV navigation and features state-of-the-art field proven components from renowned subsea manufacturers iXblue, Nortek and RTS. NEMO has been designed for maximum reliability with such features as maintenance-free power drop-out protection, titanium housing and connectors and FOG technology. NEMO comes ready-calibrated in a robust single housing. The remarkably compact size and low weight of the NEMO and customiable mounting brackets makes it ideal for placement on a large range of ROVs from observation-class to work-class.

Specifications

Product	Nemo Subsea Navigator
Country of origin	Norway
Manufacturer	Rental Technology & Services AS

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Inertial navigation

DVL-aided lowest expected performance	0.2 % TD (CEP 50)
DVL-aided optimal performance in typical conditions	0.04 % TD (CEP 50)
Static position output with DVL	<1 meter/hour
No aiding for 60s /120s	0.6m / 2.2m
Static position output with DVL	Three times better
Heading /roll/pitch range	0° -360° /± 180° /±90°
Heading dynamic accuracy Stand Alone/ with DVL/ USBL/..	0.15 deg secant latitude
Roll & Pitch dynamic accuracy	0.05 deg RMS
Heading output	5 minutes
Settling time	15 minutes
Resolution	0.01deg
Rotation rate dynamic range	Up to 250° /Sec
Acceleration dynamic range	+/-5g
Inertial 3D velocities	Available with or withour DVL or acoustics or Sparse Array

Doppler Velocity Log - Bottom Velocity

Single ping @ 3 m/s	0.5 cm/s
Long-term accuracy	± 0.1 % ± 0.1 cm/s
Minimum altitude	0.2 m
Maximum altitude	75 m
Velocity resolution	0.01 mm/s
Maximum pring rate	8 Hz

Doppler - Water tracking

Minimum accuracy	0.3 % of measured value ± 0.3 cm/s
Minimum range	2.0 m

Pressure- Sensor

Pressure	0.1 % FS / precision better than 0.002 % of full scale per sample
Temprature operating/ storage	-4° to + 40°C ± 0.1°C, -20 yo + 60°C

Current profiler

Minimum accuracy	0.3 % of measured value ± 0.3 cm/s
Velocity resolution	0.1 cm/s
Interval	User-specified Nth ping
Maximum range	30 m
Blanking	0.1 m
Cell size	0.2-2.0
Max # cells	150

Physical

Depth Rating	4000 m
Dimensions	Ø190 X 360mm
Weight	19 kg (air), 11,5 kg (salt water)
Material	Titanium
Connectors	1 x 19pin MINK (Main) (*iXblue ROVINS & PHINS Compatible) 1 x 26pin MINM (Optional), 1 x 12pin MINK (Optional)

Interface

Internal Storage (Data logging)	512 MB INS, 16GB DVL
Ethernet	100 Mbit,UPD/TCP Client/Server(Web Server (GUI)
Serial RS232	4 x Isolated Input & Output Ports /DVL/Repeater (depending on requested wiring)
Pulse Port	2 x Input for PPS, 1 output (depending
Trigger Port	DVL Input Trigger (Configurable Rising/failing/Edges)
Input / Output Format	Industry Standards: NMEA0183,ASCIII, Binary
Data Output Rate	Up to 200 Hz
Power Supply / Consumption	24 VDC /< 20 W

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