

# Sperry Marine

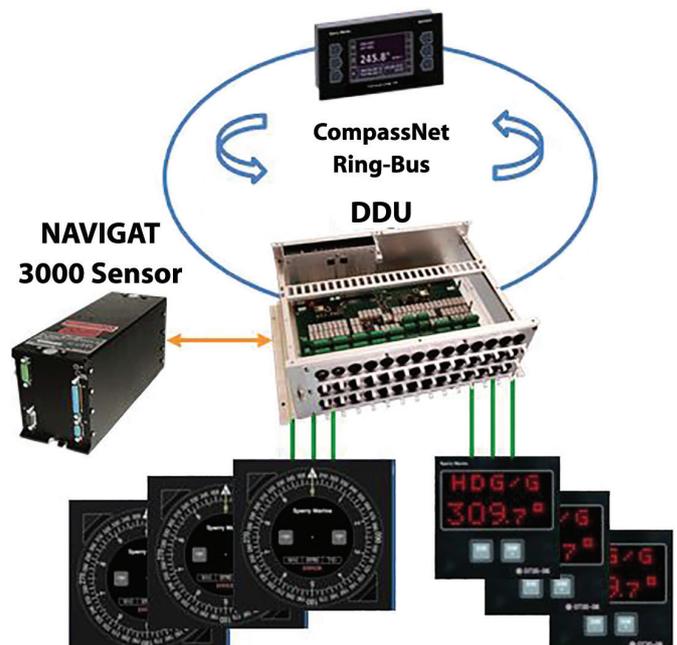
## NAVIGAT 3000



The durable and reliable solution for mega yachts, cargo vessels, cruise liners and the offshore DP market

### Features

- High Dynamic Accuracy
- Maintenance free, no moving parts
- Ultra-fast settling time of 10 minutes
- MTBF 130,000 hours
- Type approved for HSC vessels and INS integration
- Type approved rate-of-turn output
- Roll, pitch and x/y/z outputs
- Heave output
- Solid state, fully electronic strap-down technology
- Compact size and low weight
- Reliable state of the art fibre-optic technology
- For single and multiple configurations



# NAVIGAT 3000 Fibre-Optic Heading and Attitude Reference System

The NAVIGAT 3000 is the flagship of Northrop Grumman Sperry Marine's successful gyrocompass portfolio with over 20 years of experience in fibre-optic gyrocompass technology. Fully integrated in CompassNet as single or multiple compass solution, it brings all benefits of the ring-bus system, such as simplified cabling, fast installation time, high system flexibility, increased redundancy and hot plug-and-play.

With an ultra-fast settling time, better than Hemispherical Resonator Gyros (HRGs), unique field MTBF and its high precision outputs of rate-of-turn, roll, pitch, x-/y-/z-rates and heave, the NAVIGAT 3000 is the ideal solution for any vessel application, especially for dynamic positioning (DP) systems, platforms and cruise liners. The outstanding robustness makes the NAVIGAT 3000 a rewarding long-term investment.

The NAVIGAT 3000 is fully type approved, including high-speed craft (HSC) and integrated navigation systems (INS). The type approved rate-of-turn output can be used instead of a separate rate gyro (dual NAVIGAT 3000 required).

## Technical Data

### Accuracy

Heading	≤ 0.4° secant latitude RMS
Roll & Pitch	≤ 0.1° RMS
Rate-of-Turn	≤ 0.018° / minute
x-/y-/Rate	1000 ppm 0.1% RMS
Heave	0.1 m

### Power Supply

Power supply	2x 24 V DC (main and back-up)
Power consumption	32 W

### Operational Characteristics

Operational Range	± 78° latitude
Velocity	± 75 knots
Roll & Pitch	± 45° (± 180°, reduced accuracy)
Angular Rates	± 90° / second
Acceleration	± 19.5 m / second <sup>2</sup>
Max. follow-up speed	100° / second

### Alignment

Dynamic conditions at sea	≤ 30 minutes
Static conditions	≤ 10 minutes at latitudes ≤ 78° ≤ 210 seconds at latitudes ≤ 45°

### Environmental

Protection Grade	IP 23 (IEC/EN 60529)
Ambient Temperature	-15° C to +55° C / 5° F to 131° F
Storage Temperature	-35° C to +70° C / -31° F to 158° F
Requirements / EMC	Acc. IEC 60945 / .DO-160

### Interfaces\*

#### Serial Interfaces According IEC 61162:

19x Sensor data output, 8x with 24 V DC power out
1x Printer output or sensor data output
8x Serial data input (2x GNSS, 2x Speed Log, 1x Rudder angle, 1x Set Heading, 2x spare)
1x Bi-directional alarm communication acc. IEC 61924-2

#### Analogue Interfaces:

1x ± 10 V Rate-of-Turn output
1x Fluxgate input, incl. Fluxgate power supply

#### Alarm / Status Interfaces (Digital):

11x Alarm output
7x Status output (G1-G4, M active, GAS active, Mute out)
4x Status input (Auto/Man, 180° Offset, Mute in, Spare)

\*Interfaces connected to DDU, see CompassNet brochure

#### Dimensions, Weight and MTBF

Width 102 mm
Depth 278 mm
Height 128 mm
Weight ca. 3 kg (4 kg with tray)
MTBF 130,000 hours (field data)

#### Compliance and Approvals

IMO A.424(XI), A.694(17), A.821(19) and 2000 HSC Code 13, A.526(13) MSC.191(79), ISO 8728 (2014), IEC 60945 (2002) incl. corr. 1 (2008), IEC 62288 (2014), IEC 61162-1 (2010), IEC 61162-2 (2009)

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