Sperry Marine

NORTHROP GRUMMAN

NAVIGAT X MK 2

Digital Gyrocompass System

NAVIGAT X MK 2 Digital Gyrocompass System

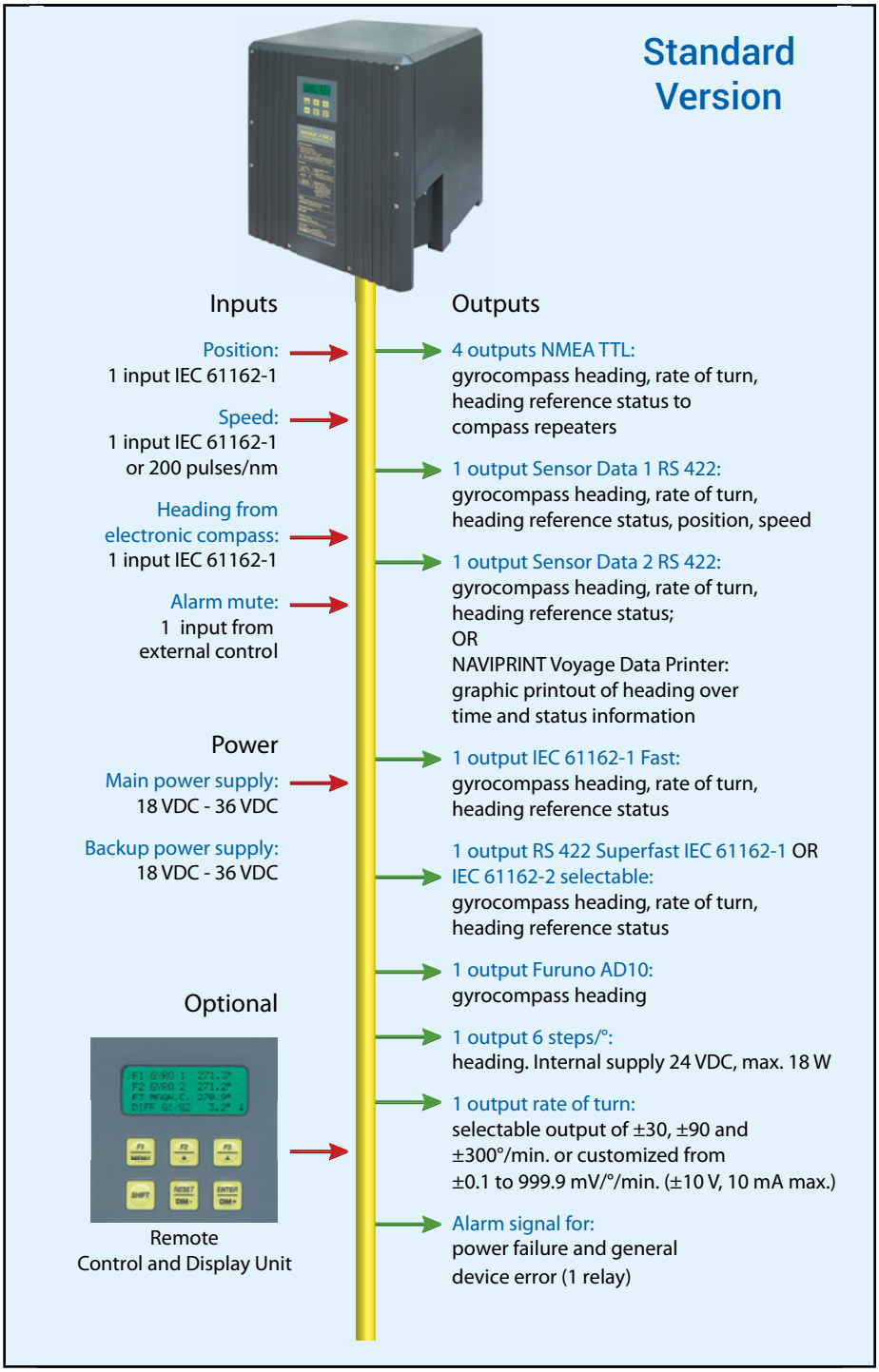
OVERVIEW

The Sperry Marine NAVIGAT X MK2 digital marine gyrocompass system provides accurate North-speed error-corrected true heading as well as rate-of-turn data under all operating conditions and is a cost-effective solution for all international carriage requirements.

The NAVIGAT X MK 2 gyrocompass is a compact, one-unit design that runs on a 24-volt power supply with two independent DC inputs. It can drive up to four analogue repeaters and provides five additional serial data outputs and one six-steps/degree output. Based on the proven Sperry Marine NAVIGAT X MK 1 design, the gyrocompass provides better than 40,000 hours mean time between failures. The system remains north-stabilized even during short power interrupts of up to 3 minutes.

The NAVIGAT X MK 2 complies with International Maritime Organization (IMO) regulations A.424(XI) and A.694(17) as well as the International Standards Organization (ISO) standard 8728, and is fully type-approved by Germanischer Lloyd (GL) in accordance with the Marine Equipment Directive (MED) 96/98/EC.

The NAVIGAT X MK 2 completes the Sperry Marine range of heading sensors, which now comprises the NAVIGAT 3000 fiber-optic gyrocompass, the NAVIGAT X MK 1 and the NAVIGAT X MK 2 digital gyrocompasses.



MAIN FEATURES

- Performance in accordance with IMO A.424(XI), A.694(17), and ISO 8728
- MED (Wheelmark) approval
- Comprises one single unit
- Power supply: two independent 24 VDC inputs
- Control and display unit (not removable) in front cover with 4-digit heading display and 6 operating keys
- Heading accuracy
  - Static ≤ 0.1° secant latitude
  - Dynamic ≤ 0.4° secant latitude
  - Settle point error ≤ 0.1° secant latitude
- Automatic static north speed error correction – no extra unit required
- Rate-of-turn output
- High speed transmission and follow-up system 100°/sec
- Highly accurate heading data transmission by means of shaft encoder
- Self-aligning repeater compasses with serial interface IEC-61162-1 / RS 422
- Gyro system remains north-stabilized during power interruptions within the required accuracy
- Twin rotors (19,000 rev./min.) and liquid damping system eliminate latitude error
- ± 180° electronic alignment error correction in setup program (mechanical correction is not necessary)
- High MTBF (40,000 hours)
- 18-month maintenance intervals
- Monitoring and alarm functions for all voltages, gyroscope current and follow-up system
- Short maintenance and repair times – low service costs

Transmitting Magnetic Compass (TMC) Version

NAVITWIN IV
Heading Management System

Electronic Compass

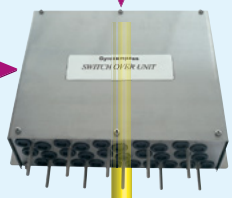
either - or

JUPITER
Magnetic Compass
with Flux Gate

Data I/O

Heading Diff Alarm

Off Heading Alarm



Switch-Over
Unit

Inputs

Position:
1 input IEC 61162-1

Speed:
1 input IEC 61162-1
or 200 pulses/nm

Steering mode status:
1 input Man/Auto
from selector

Alarm mute:
1 input from external control

Power

Main power supply:
18 VDC - 36 VDC

Backup power supply:
18 VDC - 36 VDC

Optional

Remote
Control and Display Unit

Outputs

4 outputs NMEA TTL:
gyrocompass heading, rate of turn,
heading reference status to compass repeaters

1 output Sensor Data 1 RS 422:
gyrocompass heading, rate of turn,
heading reference status,
position, speed

1 output Sensor Data 2 RS 422:
gyrocompass heading, rate of turn,
heading reference status;
OR
NAVIPRINT Voyage Data Printer: graphic printout
of heading over time and status information

1 output IEC 61162-1 Fast:
gyrocompass heading, rate of turn,
heading reference status

1 output RS 422 Superfast IEC 61162-1 OR
IEC 61162-2 selectable:
gyrocompass heading, rate of turn,
heading reference status

1 output Furuno AD10:
gyrocompass heading

1 output 6 steps/°:
heading. Internal supply 24 VDC, max. 18 W

1 output rate of turn:
selectable output of ±30, ±90 and ±300°/min. or
customized from ±0.1 to 999.9 mV/°/min.
(±10 V, 10 mA max.)

1 alarm signal for:
heading difference (1 relay)
power failure and general device error (1 relay)

Sperry Marine

NORTHROP GRUMMAN

MAIN FEATURES

- Permanent storage of operational data (gyrosphere current, temperature, elapsed operation time)
- Over 250 Sperry Marine service locations worldwide

POWER CONSUMPTION

Start-up	DC 80 W
Operation	DC 45 W
Each repeater (analogue)	6 W

DIMENSIONS AND WEIGHT

Width	404 mm
Height	520 mm
Depth	420 mm
Weight	25 kg

ACCESSORY EQUIPMENT

Bearing repeater compass
with 360° card in a stand
with azimuth device PV 23
Total weight: 16.1 kg

Bearing repeater compass
with 360° card
in a bulwark console
Weight: 10.3 kg

Prismatic azimuth device
PV 23
Weight: 1 kg

NAVIPRINT
Navigation Data Printer
Weight: 8 kg

Universal Digital Repeater
Weight: 1.0 kg with cable

Steering repeater compass
for console mounting with
360° and 10° compass cards
Weight: 1.5 kg

Console repeater compass
with 360° card
Weight: 1.5 kg

Bulkhead repeater compass
with 360° card
Weight: 2.9 kg

For more information, please contact:

AMERICAS

New Orleans, LA USA
Tel: +1 504-328-9171

ASIA

China, Shanghai
Tel: +86-21-5179-0199

Hong Kong, Sheung Wan
Tel: +852-2581-9122

Japan, Tokyo
Tel: +81 (03)-3863-7401

Singapore
Tel: +65-6274-3332

South Korea, Busan
Tel: +82-55-544-7458

Taiwan, Kaohsiung
Tel: +886-7-33-17-786

CANADA

Nova Scotia, Halifax
Tel: +1 902-468-9479

British Columbia, Vancouver
Tel: +1 604-821-2090

EUROPE

Belgium, Antwerp
Tel: +32-3-233-14-33

Denmark, Copenhagen
Tel: +45-77-33-66-33

Germany, Hamburg
Tel: +49-40-299-00-0

The Netherlands, Vlaardingen
Tel: +31 (0)-10-4451600

Norway, Bergen
Tel: +47-55-94-94-94

United Kingdom, New Malden
Tel: +44 (0)-20 8329-2000

www.sperrymarine.com

BR-218-BLB-0713
A330 # 13-1993
N&MSD Comms

Approved
Unlimited Public Release