

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:**That the Gyro compass**

with type designation(s)
NAVIGAT X MK1

Issued to

**Northrop Grumman Sperry Marine B.V. - German Branch
HAMBURG, Germany**

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2017/306,**

item No. MED/4.3. SOLAS 74 as amended, Regulations V/18, V/19, IMO Res. A.424(XI), IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

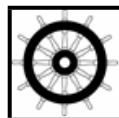
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-06-12.**

Issued at **Hamburg** on **2017-06-20**

DNV GL local station:
Hamburg

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV GL SE**

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Sven Dudzus
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

The Northrop Grumman Sperry Marine Gyrocompass NAVIGAT X MK1 comprises of the following equipment necessary for functioning:

Mastercompass: NAVIGAT X MK1	Type: 4914-CA or 4914 (MOD 10) or 4914-AA (MOD 7)
With Gyrosphere:	Type: 4911 or 5000
And Container Mod. 10/2	Type: 4991-2000
or Container Mod. 7/2	Type: 4991-3000
or Container Mod. 10/3	Type: 4991-4000
or Container Mod. 10/4	Type: 5026-4000
Heading Management System NAVITWIN IV	Type: 4994
The following repeater may be used:	
Steering repeater (console mounted)	Type: 5016-AA
Steering repeater (console mounted)	Type: 4881
Steering repeater (console mounted)	Type: 4881-AA
Steering repeater (console mounted)	Type: 5016-AB
Steering repeater (console mounted)	Type: 4881-AD
(Magnetic, only in connection with NAVITWIN)	
Repeater (bulkhead mounted)	Type: 5016-AC
Repeater (bulkhead mounted)	Type: 4881-AC
Repeater (bulkhead mounted)	Type: 4881-AK
Bearing repeater	Type: 5016
Bearing repeater	Type: 5016-BB
Bearing repeater	Type: 4881-AB
Bearing repeater	Type: 4881-AM
with Bearing repeater stand	Type: 4622-AB or 4622-AC or 4622-AD
Bearing repeater stand (Sperry)	Type: 1812783
Bearing repeater bracket	Type: 4890
Bearing repeater bracket (height adjustable)	Type: 4905
Terminal box	Type: 4884
Terminal box	Type: 4894
Options:	
Compass Monitor NAVITWIN III	Type: 4923
Voyage Data Printer	Type: 4805
(only in connection with NAVITWIN)	
Gyro Compass Control Unit	Type: 4926
Fluxgate Coil for Magnetic Compass	Type: 4863
Digital Tape Repeater	Type: DTR 600
Universal Digital Repeater (UDR)	Type: 4891
Multifunction Display NAVIDATA	Type: 4806-AC
Multifunction Display NAVIDATA	Type: 4806-AD
Multifunction Display NAVIDATA	Type: 4806-AE
Switch over box	Type: 4932
Splitter box	Type: 4936 or 4992
Optoisolator	Type: 55555
Power Supply	Type: 2568

Job Id: **344.1-006493-8**
Certificate No: **MEDB00002AN**

Application/Limitation

None

Type Examination documentation

Tests carried out

Applicable tests according to ISO 8728 (2014), IEC 60945 (2002) including Corr.1 (2008), IEC 62288 (2014), IEC 61162-1 (2016) and IEC 61162-2 (1998).

Marking of product

According to Article 10 of the Council Directive (MED):

- The wheel mark shall be affixed visibly, legibly and indelibly to the product or to its data plate and, where relevant, embedded in its software. Where that is not possible or not warranted on account of the nature of the product, it shall be affixed to the packaging and to the accompanying documents.
- The wheel mark shall be affixed at the end of the production phase.
- The wheel mark shall be followed by the identification number of the notified body, where that body is involved in the production control phase, and by the year in which the mark is affixed.
- The identification number of the notified body shall be affixed by the body itself or, under its instructions, by the manufacturer or the manufacturer's authorised representative.

For specific products, manufacturers may use an appropriate and reliable form of electronic tag instead of, or in addition to, the wheel mark.

END OF CERTIFICATE