

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00002TS
Revision No:
2

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

This is to certify:

That the Heading control system (HCS) and Heading control system for high speed craft

with type designation(s)
PilotStar NX, PilotStar NX RRS

Issued to

Raytheon Anschütz GmbH
Kiel, Schleswig-Holstein, Germany

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

Regulation (EU) 2020/1170,

item No. MED/4.16. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.342(IX), IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.64(67) Annex 3, IMO Res. MSC.302(87)

item No. MED/4.40. SOLAS 74 as amended, Regulation X/3, IMO Res. A.694(17), IMO Res. A.822(19), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO MSC.1/Circ.1349

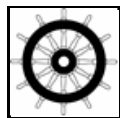
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-11-27**.

Issued at **Hamburg** on **2021-12-17**

DNV local station:
Hamburg – CMC North/East

Approval Engineer:
Jörg Rebel



Notified Body
No.: **0098**

for **DNV SE**

Christine Mydlak-Roeder
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) 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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 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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The Heading control system/Heading control system for high speed craft PilotStar NX and PilotStar NX RRS comprises of:

Mandatory equipment	
Operator Unit PilotStar NX	Type: 102-820.NG001 or 102-820.SAxxx Software Version 102-820.P0001 E00.xx (xx ≥ 20)
Operator Unit PilotStar NX RRS (Rudder Roll Stabilization)	Type: 102-824.NG001 Software Version 102-824.P0001 E00.xx (xx ≥ 04)
Interface Unit PilotStar NX	Type: 102-821.NG001 Software Version 102-821.P0001 E00.xx
	(The Interface Unit PilotStar NX is not required in combination with the NautoSteer AS steering gear control system.)
Follow up amplifier (only required for PilotStar NX RRS)	Type: 139-158.NG003 Software Version 139-158.P0003 E00.xx
Additional Equipment	
Interface Modul (Serial/Ethernet)	Type: MOXA NPort 5232I-T Type: MOXA EDS408A
Tiller Follow Up AS	Type: 105-307 NG001 / NG003 / NG005 / NG006 Software Version 105-307.P0001 E00.xx
Tiller Non Follow Up AS	Type: 105-308 NG001 / NG003 Software Version 105-307.P0001 E00.xx
FU Handwheel AS	Type: 105-400 NG001 / NG003 / NG005 / NG006 Software Version 105-400.P0001 E00.xx
Override Signal Unit AS	Type: 105-313.NG001 / NG002 Software Version: 105-313.P0001 E00.XX
CAN Distribution Unit AS	Type: 138-128 NG001 / NG002 Software Version 138-128.P0001 E00.xx

The product complies with the requirements of IEC 62923-1 and -2 (2018) and may be linked to a Bridge Alert Management (BAM) System or an Integrated Navigation System (INS).

Documentation:

- 100000001054 Operator and Service Manual (Ed. 006 and higher)
- 10000000250 Operator Manual Pilotstar NX RRS (Ed. 003 and higher)
- 10000000251 Service Manual Pilotstar NX RRS (Ed. 003 and higher)

Application/Limitation

The Pilotstar NX RRS is certified as Heading Control System (HCS) according to item no. MED/4.16, only.

Type Examination documentation

Functional / Environmental Test Reports: TTD01-06-17 Rev.1, TTD01-08-20 Rev.1

Tests carried out

- Environmental and EMC testing: IEC 60945 (2002) incl. Corrigendum 1 (2008)
- Interface testing: IEC 61162-1 (2016), IEC 61162-2 (1998) and IEC 61162-450 (2018)
- Presentation testing: IEC 62288 (2014)
- Bridge alert management testing: IEC 62923-1 (2018) and IEC 62923-2 (2018)
- Performance testing: ISO 11674 (2006) and ISO 16329 (2003)



Job Id: **344.1-007043-4**
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Notes:

1. Performance testing of Pilotstar NX RRS has been done according to ISO 11674 (2006), only.
2. The validity of this certificate will be extended to 2026-02-22, if compliance with ISO 11674 (2019) has been verified.

Marking of product

According to IEC 60945, Sect.4.9:

The product to be marked with following information, where practicable:

- Identification of the manufacturer,
- Equipment type number or model identification under which it was type tested,
- Serial number of the unit,
- Compass safe distance.

Alternatively, the marking may be presented on a display at equipment start-up, and in case of fixed equipment compass safe distance may be given in the equipment manual.

END OF CERTIFICATE