

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 Heading control system (HCS)

with type designation(s)
NautoPilot 5000 Series

Issued to

Raytheon Anschütz GmbH
Kiel Schleswig-Holstein, Germany

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

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

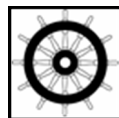
item No. MED/4.16. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.342(IX), IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.64(67) Annex 3, IMO Res. MSC.302(87)

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

This Certificate is valid until **2020-07-28.**

Issued at **Hamburg** on **2017-10-12**

DNV GL local station:
Hamburg



for **DNV GL SE**

Approval Engineer:
Jörg Rebel

Notified Body
No.: **0098**

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Sven Dudszus
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-007534-1**
Certificate No: **MEDB00003BU**

Product description

The Heading Control System (HC) NautoPilot 5000 series covers the following trade names: NautoPilot 5100, NautoPilot 5300, NautoPilot 5400 and NautoPilot 5500.

It consists of the following equipment:

1. Operator Unit Autopilot NP5000 AS: Type: 102-890 NG001 / NG002 Hardware Rev.: E00
102-890.SAxxx Software Rev: E03.xx

And 2.

Autopilot Interface Unit AS: Type: 102-891 NG001 Hardware Rev.: E01
Software Rev: E01.xx

And 3.

Licence Key: NP 5100 or NP 5300 or NP 5400 or NP 5500

The HCS with licence key NP 5300, NP 5400 or NP 5500 may be used in operating mode drift corrected Course Control.

The following Serial-to-Ethernet converter can be used as serial interface to BAM / BNWAS:
Moxa NPort NPort 5232-T

Inputs:

Heading: Serial Course Bus from Anschütz Gyro System, IEC 61162 THS, HDT (<100ms),
Magnetic sonde from magnetic compass or IEC 61162 HDG

Speed: Serial Course Bus from Anschütz Gyro System, IEC 61162 VTG, VHW, VBW,
Puls log 200p/NM

Position: IEC 61162 GLL, GGA

Outputs:

Navigation data via serial link IEC 61162, FU-Amlifier (+/- 10V, 4mA to 20mA, ON/OFF 24V to 110VDC),
Potential free contacts for SYSTEM FAILURE, OFF HEADING, HEADING MONITOR, BACKUP NAVIGATOR
ALARM

Bidirectional Trackcontrol acc. IEC 61162

Additional equipment:

Feedback unit: 101-532 NGxxx

Magnetic sonde: 108-010. NG001/NG002/NG003/NG004

Application/Limitation

None

Type Examination documentation

No.	Document No.	Date	Document Title	Test standard
1	TTD01-09-10_NP5000	2010-10-04	GL-Baumusterprüfung Dokumentation – Autopilot NP5000	ISO 11674, IEC 62065, IEC 60945, IEC 62288, IEC 61162-1
2	TTD01-04-12_NP5000	2012-04-25	GL-Baumusterprüfung Dokumentation – Autopilot NP5000	In addition to 1: MSC.302(87), MSC.252(83)
3	TTD01-01-13_NP5000	2013-01-11	EC Type Approval – Nautopilot NP5500	In addition to 1: ISO 16329
4	TTD01-05-14_NP5000	2014-07-09	EC Type Approval – Track Control Systems – Nautopilot NP5400/NP5500 with ECDIS	In addition to 1: ISO 16329, IEC 61924-2, IEC 61162-2
5	4002.DOC010102	2016-02	Operator Manual – NautoPilot 5000 Series Operator Unit 102-890 NG001/NG002	

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6	4002.DOC010302	2016-05	Service Manual – NautoPilot 5000 Series Operator Unit 102-890 NG001/NG002	
7	4003.DOC010302	2016-02	Service Manual – Autopilot Interface AS – Interface Unit 102-891	
8	4237.DOC010302	2016-12	Service Manual – Autopilot Interface AS – Interface Unit 102-891 NG001 E01	

Tests carried out

Applicable tests according to ISO 11674 (2006), IEC 60945 (2002) including Corrigendum (2008), IEC 61162-1 (2010) and IEC 62288 (2014).

Compliance with Bridge-Alert-Management requirements according to IEC 61162-1 (2016) and IEC 61924-2 (2012, Module C, Annex C, Annex J) including Corrigendum 1 (2013) and IEC 62288 (2014).

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