DNV·GL

Certificate No:
MEDB00003BV

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 for high speed craft

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/4.40. 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 **2020-07-28**.

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

DNV GL local station:
Hamburg

Approval Engineer:
Jörg Rebel

Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudszus
Head of Notified Body

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

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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 102-890.SAxxx	Hardware Rev.: Software Rev:	E00 E03.xx
And 2.				
Autopilot Interface Unit AS:	Type:	102-891 NG001	Hardware Rev.: Software Rev:	E01 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

Tests carried out

Applicable tests according to ISO 16329 (2003), 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