DNV·GL

Certificate No:
TAA000023D

TYPE APPROVAL CERTIFICATE

This is to certify:

That the 460 network component

with type designation(s)
NavBox

Issued to
NAVTOR AS
EGERSUND, Norway

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft
IMO Res. A.694(17) General requirements for shipborne radio equipment forming part of the global maritime distress and safety system (GMDSS) and for electronic navigational aids
DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations

Application :

Temperature	**A**
Humidity	**A**
Vibration	**A**
EMC	**B**
Enclosure	**A**

Issued at **Høvik** on **2019-03-19**
This Certificate is valid until **2024-03-18**.
DNV GL local station: **Stavanger**

Approval Engineer: **Olaf Gundersrud**

for **DNV GL**

Trond Sjåvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-028965-1**
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Product description

The Navbox includes the following components:

Unit	Model Name	Remark
Processing unit	Marine321 Box PC	
Power supply unit	FSP036-RAB AC/DC adapter	
Interface (ports)	Intel I210 GbE Ethernet	
Software	*Windows 7* *NavBox SOAP API* *NavBox GRPC API* *NavBox Core service* *NavBox Traffic Monitor service* *NavBox API service*	

Optional components

RS-232/422 ports	COM1 and COM2	**required for this interconnection*
Opto-isolator	NAVTOR serial adapter*	

Application/Limitation

The NavBox may bridge the ships-network/communication system and the ECDIS-network allowing for HTTPS file transfer from/to Navtor's server ashore.
The NavBox shall be installed in a secure location in accordance with the mounting instructions.
Any AIS/GPS information received via the optional COM-ports is for internal use only and shall not be distributed to the navigation (controlled) network.

Type Approval documentation

NPS No.	Drawing no.	Rev.	Title
12	4-15-SLS-0001	1.2	NAVTOR Back office
11	20.02.2019	1.2	NAVTOR NavBox Components Specification
10	4-15-DIS-0023		NAVTOR NavBox 460 Test report
9	4-15-DIS-0020	2.0	NavBox Production and Distribution
6	01.02.2019	2.7	NavBox mounting instructions
4	13.05.2015	1.0	CAPAX Marine321 Data Sheet - specification
3	TAA0000046		CAPAX Marine321 TA certificate

Tests carried out

Environmental standard IEC 60945 (2002)
Security standard IEC 61162-460 (2018)

Marking of product

The name and contact address of the manufacturer and type designation of the product shall be affixed to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage (*alt.: this may be stated in the operation/installation manual).*

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. Additionally, a renewal assessment is to be performed at renewal of the certificate.

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The scope of the periodical/renewal assessment is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnvgl.com