

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00000HF
Revision No:
9

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the **Electronic chart display and information system (ECDIS)**

with type designation(s)
Seall ECDIS

issued to

Seall ECDIS Limited
Aberdeen, United Kingdom

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

Regulation (EU) 2023/1667,

item No. MED/4.30. SOLAS 74 as amended, Regulations V/18, V/19, V27 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.232(82), IMO Res. MSC.302(87), IMO MSC.1/Circ.1503 Rev.1

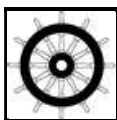
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2029-07-14**.

Issued at **Høvik** on **2024-07-15**

DNV local unit:
UK & Ireland CMC & VMC

Approval Engineer:
Tommi Juhani Rifaat



Notified Body
No.: **0575**

for **DNV AS**



Digitally Signed By: Mydlak-Röder, Christine
Location: DNV Høvik, Norway

Mydlak-Röder, Christine
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.



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 AS 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 Seall ECDIS consist of the following components:

Unit	Location
Panel PC, HD 24T21 MEC-M4E-PIB2 <i>or</i>	Protected
Panel PC, HD 24T22 ZEC-N63-4GPB1A <i>or</i>	
Panel PC, HD 24T22 ZEC-N63-4GAB1A <i>with</i>	Protected
- Keyboard/ Trackball HT RKCT92S2034-W-MC1	Protected
<i>or</i>	
Panel PC, North Invent Wave PERFORMANCE 24" <i>or</i>	Protected
Panel PC, North Invent Wave PERFORMANCE 19" <i>with</i>	Protected
- Keyboard/ Trackball HT RKCT92S2034-W-MC1 (optional)	Protected
- COM module, HT 00292 OPT-A1 (optional)	Protected
- Mounting bracket, HD TMB SX1-C1 (optional)	Protected
- USB cable, JH C01 MF A-A (optional)	Protected

Software version. 1.3.xx, Pres.lib. 4.0.x

Operating system: Windows 10

Application/Limitation

- Seall ECDIS may additionally be interfaced with AIS and Radar for presentation of target information.
- Seall ECDIS may additionally be interfaced with Navtex for presentation of Navtex information.
- Seall ECDIS cannot be connected to an INS for reception of sensor data.
- Seall ECDIS shall be installed & configured according to the Installation and Commissioning Guide.
- A dual installation of the designated ECDIS is found to comply with the SOLAS requirements for ECDIS with Back-up arrangements.

Tests carried out

- Performance testing, IEC 61174 (2015)
- Environmental testing, IEC 60945 (2002) incl. IEC 60945 Corr.1:2008
- Serial interface testing, IEC 61162-1 (2016)
- LAN interface testing, IEC 61162-450 (2018)
- Performance testing, presentation, IEC 62288 (2021)
- Bridge Alert Management testing, IEC 62923-1 (2018) and IEC 62923-2 (2018)

Type Examination documentation

DNV No	Drw No	Rev	Title
68		1.4	Report: Seall, IEC 62288 ed.3 Test Report
67	SEALLECDIS-TEST-03	1.0	Report: Seall, SEALL ECDIS Hardware Test Plan Wave PERFORMANCE PCs
64	TAA00002TT	1	Certificate: DNV, North Invent Wave Bridge Monitors
63	TAA000028U	1	Certificate: DNV, North Invent Wave II monitor series
61	SEALLECDIS-TEST-03	1.0	Report: Seall, ECDIS Panel PC Test plan
59	DANAK-19/14501	2014-09-19	Report: Delta, Test for Keyboard/trackball RKTCT92S0001-W-MC1
52	DOC206335-1	2	Report: Hatteland, Conformance Test Report HD 24T22 MMC
45	MRA0000014	6	Certificate: DNV, Series X G2 Maritime Multi Computer
43		1.0	Report: Seall ECDIS, IEC 61162-450 test report
42		2	Doc: Seall ECDIS, Standard alert identifiers
41		9	Report: Seall ECDIS, IEC 62923-1/2 test report
39	SEALLECDIS-TEST-04	1.0	Report: Seall ECDIS, HW and Windows Upgrade Evaluation & Test Report
36	SEALLECSIS-TEST-03	1.0	Report: Seall ECDIS v.12 Test plan

DNV No	Drw No	Rev	Title
35		1.4.18	Manual: Seall, User Manual
34	SEALLECDIS-TEST-02	1.1	Report: Seall ECDIS, Test plan IEC61174 Edision 4 Upgrade Tests
32		1.4.4	Manual: Seall Installation and Commissioning Manual
24			Manual: Seall ECDIS NMEA Sensor Interfaces
19	SEALLECDIS-INTERFACETEST-01	1.0	Report: Seall ECDIS Interface Test Plan
1		1	Manual: Seall ECDIS Maintenance Procedure

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.