



DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2009/26/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. **MED-B-6051**

This is to certify that the
Electronic Chart Display and Information System (ECDIS)

with type designation(s)
DM800E

Manufacturer
Danelec Marine A/S
Birkerød, Denmark

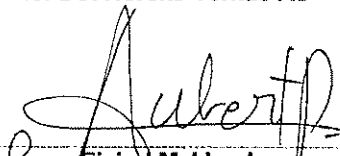
is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/4.30 and Annex B, Module B in the Directive. IMO Resolutions A.694(17), MSC.191(79) & MSC.232(82)

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

Høvik, 2010-04-20
for **Det Norske Veritas AS**

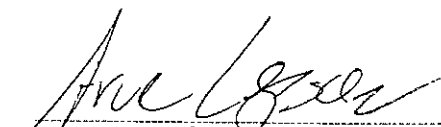


This Certificate is valid until
2015-04-20


for **Eivind Mykland**
Head of Department

Notified Body No.: **0575**

DNV local office:
Copenhagen


Arve Lepsøe
Surveyor



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.



Certificate No.: MED-B-6051
Item No.: A.1/4.30
Job Id.: 344.1-001892-1

Product description

DM800E ECDIS consisting of the following components:

- Computer
- Monitor
- Keyboard/ Trackball
- DVD Drive
- Alarm panel

For more product details see Appendix.

For the latest revision of the Appendix, see <http://exchange.dnv.com/tari>

Application/Limitation

- The operating system is Microsoft Windows Embedded standard 2009.
- The installation shall be verified and tested onboard according to Installation manual.

Notes

See Appendix.

Type Examination documentation

See Appendix.

Tests carried out

- Performance testing, IEC 61174 Ed. 3.0 (2008)
- Environmental testing, IEC 60945 (2002)
- Serial interface testing, IEC 61162 (2007)
- Presentation of navigation information, IEC 62288 (2008)

Marking of product

The manufacturer and Type Designation to be applied to the equipment in a clearly visible location and in addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/ or supply voltage.

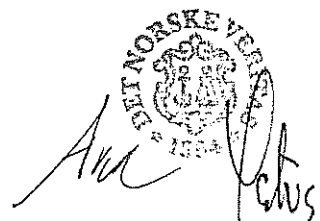
Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a of Certificate Conformity.





Certificate No.: MED-B-6051
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APPENDIX REV. NO. 1 (Page 1 of 2)

Product description

DM800E consisting of the following components:

Hardware modules:

Computer:

- DM800E ECDIS DPU Part No. 1301398

Monitor:

- North Invent Sea Line 21,3", MK3, or Part No. 1301415
- North Invent Sea Line 19,0", MK3 Part No. 1301416

Keyboard/ Trackball:

- KSLM106F1USB-WLED Part No. 2301384

DVD Drive:

- DVD 01-001 Part No. 2301387

Alarm Panel

Part No. 1301365

Software modules:

- System Software version V1.20
- Application software version v5.0.82
- IHO presentation library ver. 3.4

Notes

- A dual installation of DM800 E is found to comply with the requirements for ECDIS with Back-up arrangements.
- DM800E may be optionally provided with radar overlay functionality.
- DM800E may be optionally provided with weather information overlay functionality
- DM800E additionally supports loading of SENC (CM93/3 format) resulting from conversion from ENC to SENC ashore (SENC Delivery).

Type Examination documentation

Description:	Document no:
User Manual for Dolphin ECDIS	9301584, rev. 1.0
User Manual for DM800 ECDIS hardware	9301582, rev. 1.0
Installation Manual for DM800E ECDIS	9301583, rev. 1.2
Performance test report - DM800E ECDIS	2009-1052, rev.02
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL190-01, Day mode	L102043-3233
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL190-01, Dusk mode	L102043-3234
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL190-01, Night mode	L102043-3235
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL213-01, Day mode	L102043-3236
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL213-01, Dusk mode	L102043-3237
DELTA Kalibreringscertifikat - Calibration of FPD for use as ECDIS monitor - SL213-01, Night mode	L102043-3238



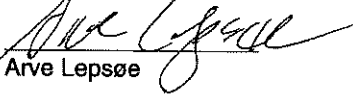


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APPENDIX REV. NO. 1 (Page 2 of 2)

Type Approval testing of ECDIS (DM800E)	A506510-1
Interface Test of ECDIS (DM800E)	A506681
Type approval testing of Sea Line Monitors	A505354, rev.1
Excessive voltage test of two Sea Line TFT displays	A506792-03

Place and date
HØVIK, 2010-04-20


Arve Lepsøe





END OF CERTIFICATE