



**EC TYPE EXAMINATION (MODULE B) CERTIFICATE**

No.	03-001480/031191
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**THIS IS TO CERTIFY:**

That Croatian Register of Shipping did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with requirements of Marine Equipment Directive (MED) 96/98/EC as last amended by directive 2014/93/EU, subject to any conditions in the schedule attached hereto.

**TYPE AND DESCRIPTION OF PRODUCT**

<p><b>Electronic chart display and information system - ECDIS</b> with type designation <b>Maris ECDIS900 MK5 M5024</b></p>
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**ANNEX A.1 NO AND ITEM DESIGNATION**

A.1/4.30 – Electronic chart display and information system (ECDIS)
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**MANUFACTURER:**

<p><b>NAVICO HOLDING AS, Nyåskaiveien 2, 4374 Egersund – Norway</b></p>
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**REGULATIONS AND STANDARDS (in accordance with Annex A.1, Directive)**

<p>SOLAS 1974 as amended, Reg. V/19 IMO Res. MSC.232(82), IMO Res. MSC.191(79) and IMO Res. A.694(17)</p>
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**NOTICE:**

1. Further details of the product and conditions for certification are given overleaf.
2. This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.
3. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply.
4. 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-control phase module (D, E, or F) of ANNEX B of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.
5. In case limitations of use apply, these should be indicated of in the Schedule of Approval.

Issued by Croatian Register of Shipping, notified body number 2489.

This certificate is valid until: **2019-10-30**

Place and date: **Split, 2015-10-30**

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Signature  
**Marinko Popović, dipl.ing.**

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

*Maris ECDIS900 MK5 M5024 system consists of the following components:*

	<i>Item name</i>	<i>item number</i>
1.	<i>Maris ECDIS900 MK5 PC</i>	<i>000-12425-xxx and 151-10462-xxx</i>
2.	<i>Bracket for Maris ECDIS900 MK5 PC Dell</i>	<i>000-12522-001</i>
3.	<i>Simrad Monitor M5024</i>	<i>000-11781-xxx and 151-10380-xxx</i>
4.	<i>Simrad E0102 – Alarm panel</i>	<i>000-12264-xxx and 151-10381-xxx</i>
5.	<i>Maris ECDIS900 CT&amp;A Cable</i>	<i>000-12549-xxx</i>
6.	<i>Keyboard CHERRY – US/English, USB</i>	<i>11197</i>
7.	<i>Logitech Marble USB mouse</i>	<i>11008</i>
8.	<i>SIS4000 MK2-8CH Serial to LAN</i>	<i>11346</i>

### 2. APPLICATION/LIMITATION OF USE

*The Simrad E5024 ECDIS is not tested for compliance with IEC 61174 Ed. 3.0 (2008) – Annex G (ECDIS in the RCDS mode of operation) and Annex H (Alarms and indicators in the RCDS mode of operation).*

*System is to be installed in a protected environment according to procedures in manufacturer's manuals.*

### 3. DESIGN DRAWINGS AND SPECIFICATIONS

*Maris ECDIS900 MK5 M5024 system overview, rev 1.0;*

*Maris ECDIS900 Installation Manual, item number 988-10960-xxx;*

*Maris ECDIS900 Technical Manual, item number 988-10959-xxx;*

*Maris ECDIS900 Operator Manual, item number 988-10958-xxx;*

*Alarm Panel E0102 User Guide, item number 988-10826-xxx;*

*Monitor M5000 Installation and Operation Manual, item number 988.10795-xxx.*

### 4. TYPE TEST RECORDS/LABORATORY RECOGNITION STATUS

*Performance testing – IEC 61174 Ed. 3.0 (2008), CRS witnessed – Egersund 12-17 October 2015. & Ensenada 8-9 December 2014;*

*Environmental testing – IEC 60945(2002) including Corrigendum 1(2008), CRS witnessed-Egersund 12-17 October 2015;*

*Serial interface testing – IEC 61162-1(2010) & IEC 61162-2 (1998), CRS witnessed-Egersund 12-17 October 2015.;*

*Presentation of navigation information – IEC 62288 (2008), CRS witnessed-Egersund 12-17 October 2015;*

*CRS letter of approval – 2109/TE/VB/031191 dated 2015-10-29 (All Technical Documents & Test Reports included).*

### 5. MATERIALS OR COMPONENTS REQUIRED TO BE TYPE APPROVED OR TYPE TESTED

*This approval remains valid for subsequent minor software amendments, as allowed by the 4.7.5.x. format (x=a numeral), where written details of any such modification have been submitted to and accepted by the approvals authority.*

### 6. OTHER MATERIALS AND/OR COMPONENT

*Maris ECDIS900 MK5 M5024 system dual installation is found to comply with the requirements for ECDIS with Back-up arrangements.*

### 7. ONBOARD INSTALLATION AND MAINTENANCE REQUIREMENTS

*The Maris ECDIS900 shall be supplied by 12V or 24V DC in accordance with Installation Manual.*

*The installation on board shall be verified and tested according to Installation & Operation Manual.*

**8. PRODUCTION SURVEY REQUIREMENTS**

The manufacturer is allowed to affix the Mark of Conformity to equipment referred and to issue a Declaration of Conformity as long as either of the following is fulfilled:

Module D – The quality system for production and testing shall be approved by the Notified Body or,

Module E – The quality system for inspection and testing shall be approved by the Notified Body or,

Module F – Compliance of the product in this EC Type Examination Certificate is to be verified by the Notified Body who shall also issue a Certificate of Conformity.

**9. MARKING AND IDENTIFICATION**

2489/yy

Subject to compliance with the conditions in this Schedule of Approval which forms part of certificate, and those of Articles 10.1(i) and 11 of the Directive, the Manufacturer is allowed to affix the “Mark of Conformity” to the Product described herein.

(yy = last two digits of year mark affixed)

**10. OTHERS****SOFTWARE:**

Item name	SW version
Maris ECDIS900 MK5 M5024 System	4.7.5.x
IHO Presentation Library	3.4
C-map SDK	5.4
Application Manager	2.1.x.x
Operating System	Windows 7

**OPTIONAL EQUIPMENT:**

Item name	Item number
Logitech Wireless Trackball M570	000-12262-xxx
Radar Interface Box – MK 6.0	11393
Keyboard OP2010	11153
Keyboard OP3000	000-12524-xxx & 000-12525-xxx
ECDIS Network Switch	11298

**APPENDIX – TYPE EXAMINATION DOCUMENTATION**

<i>Document title</i>	<i>Identification number</i>	<i>Revision index</i>
<i>MEC report EN60945 Navico SIMRAD MO24-T</i>	<i>140122.1</i>	<i>10 June 2014</i>
<i>AAC20140622-00 MO-24P Comparative Declaration</i>	<i>AAC20140622-00</i>	<i>10 February 2014</i>
<i>Monitor MO24P Pro Differences</i>	<i>Rev 3</i>	<i>08 Jan 2015</i>
<i>EMC and Environmental Test report Dell Opti Plex XE2</i>	<i>E15008.01</i>	<i>2015-02-26</i>
<i>EMC and Environmental Test report Dell Opti Plex XE2</i>	<i>E14095.00</i>	<i>2014-04-02</i>
<i>Env-1-42271-LoC</i>	<i>42271-LoC</i>	<i>08 August 2014</i>
<i>Env-2-ESLU42271-IEC Final</i>	<i>ESL42271-IEC</i>	<i>25 August 2014</i>
<i>Env-3-EMCS42271-EN 60945 Final</i>	<i>EMCS42271-EN 60945</i>	<i>25 August 2014</i>
<i>Corrosion waiver MO24-P</i>	<i>DE20_FS181214</i>	<i>18.12.2014.</i>
<i>EMC and environmental test report Maris ECDIS900 CT&amp;A cable</i>	<i>Report No. 20689</i>	<i>2015-1028</i>
<i>Type approval certificate OptiPlex XE2 Small Form Factor</i>	<i>A-14217</i>	<i>2015-03-11</i>
<i>AP-50 MED-B certificate</i>	<i>DnV 8315 and 8316</i>	<i>2013-04-23</i>
<i>Addendum for changes on alarm panel</i>	<i>-</i>	<i>2015-01-12</i>
<i>Optical measurement on a radar display Navico with monitor Simrad 24" following IEC 62288 Ed. 1.0 2008-07</i>	<i>3F-RT14011</i>	<i>2014-10-07</i>
<i>Bescheinigung Nr. 881</i>	<i>2845/2800</i>	<i>2014-10-03</i>
<i>Compass Safe Distance</i>	<i>2005-3102</i>	<i>2005-02-24</i>
<i>Environmental Test</i>	<i>310-04-0279</i>	<i>2005-02-14</i>
<i>SIS4000 MK2 – EMC Test</i>	<i>F917800-A</i>	<i>2009-12-14</i>
<i>EN60945 test report ECDIS Keyboard NSI</i>	<i>20094390200 rev.4</i>	<i>2010-04-13</i>
<i>Test for Marine Type Approval of Backlighted keyboard with trackball RKCT92S0001-W-MC1</i>	<i>DANAK-19/14501</i>	<i>2014-09-19</i>
<i>EMC and environmental test report for Composite Digital Video Converter</i>	<i>E11095.00 rev.00</i>	<i>2011-08-05</i>
<i>Maris ECDIS900 – MED-B</i>	<i>9694</i>	<i>2015-05-27</i>
<i>Mechanical test of Adveto SIS4000 MK2 – Environmental Test Report</i>	<i>913128</i>	<i>2009-10-30</i>
<i>Type approval certificate Ethernet switches and video servers Moxa Inc</i>	<i>A-13392</i>	<i>2013-08-20</i>
<i>M5024 Colour Calibration – Test Report 1</i>	<i>15</i>	<i>2014-12-16</i>
<i>M5024 Colour Calibration – Test Report 2</i>	<i>21</i>	<i>2014-12-16</i>
<i>Corrosion waiver Optiplex XE2</i>	<i>-</i>	<i>2015-02-27</i>
<i>Logitech M570 – Environmental Test</i>	<i>140721.1</i>	<i>2014-09-02</i>
<i>MC50 Computer – EMC Test Report</i>	<i>200314148001</i>	<i>2004-11-05</i>
<i>E0102 – Alarm sound level measurement</i>	<i>20244943</i>	<i>2015-01-23</i>
<i>Audible measurement device – Calibration</i>	<i>ELMA 154317445</i>	<i>2015-10-22</i>

**END OF CERTIFICATE**