



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-12340**

This is to certify that the  
**Personal Computer**

with type designation(s)  
**EPC T 150 C2D Nautic DC & AC,  
EPC T 170 C2D Nautic DC & AC,  
EPC T 190 C2D Nautic DC & AC,  
EPC box C2D Nautic DC & AC**

Manufactured by  
**Beijer Electronics GmbH & Co. KG**  
**UNTERENSINGEN, Germany**

is found to comply with  
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application  
Location classes:

Temperature	B
Humidity	B
Vibration	A
EMC	B
Enclosure	A

Høvik, 2011-06-15  
for Det Norske Veritas AS



This Certificate is valid until  
**2013-12-31**

*Odd Magne Nesvåg*  
Odd Magne Nesvåg  
Head of Section

DNV local office:  
Essen

*Ståle Sneen*  
Ståle Sneen  
Surveyor *ALGOPO*

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.  
If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: A-12340  
File No.: 899.30  
Job Id.: 262.1-007792-2

## Product description

Industrial Panel Personal Computer

Type designation: (T=Touch)

### 24VDC Panel PC's

EPC 150 C2D Nautic
EPC T 150 C2D Nautic
EPC 170 C2D Nautic
EPC T 170 C2D Nautic
EPC 190 C2D Nautic
EPC T 190 C2D Nautic
EPC PM C2D Box Nautic

### 230VAC Panel PC's

EPC 150 C2D Nautic
EPC T 150 C2D Nautic
EPC 170 C2D Nautic
EPC T 170 C2D Nautic
EPC 190 C2D Nautic
EPC T 190 C2D Nautic
EPC Box C2D Nautic

## Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

For installation on the bridge the 'Compass safe distance' shall be ensured according to IEC60945 section 11.2.

### Product certificate

Each delivery of the application system is to be certified according to Pt.4 Ch.9 Sec.1. The certification test is to be performed at the manufacturer of the application system according to an approved test program before the system is shipped to the yard. After the certification the clause for application software control will be put into force.

### Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

## Type Approval documentation

Datasheets: International Catalogue page 36 to 56  
Test Reports: Regelungs- und Messtechnik (RMS) Test Report  
No. 02 - 03 / 2009, dated 2009-04-24  
MeßTechnik Nord GmbH Test Report; EMC- Tests  
No. 05963.045\_1.09, dated 2009-03-30  
Regelungs- und Messtechnik (RMS) Test Report  
No. 03 - 03 / 2009, dated 2009-03-28  
MeßTechnik Nord GmbH Test Report; EMC- Tests  
No. 05963.046\_1.09, dated 2009-03-30  
Bundesamt fuer Seeschifffahrt und Hydrographie  
No.38, dated 2009-08-11

## Tests carried out

Applicable tests According to Standard for Certification No. 2.4, April 2006.

For the bridge mounted components the 'Acoustic noise and signals' and the 'Compass safe distance' were measured according to sections 11.1 and 11.2 of IEC 60945, 4<sup>th</sup> edition (2002).



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### Certificate retention survey

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the survey are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE