



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-12339

This is to certify that the
Peripheral Equipment

with type designation(s)
Monitor

**MTe T150 E Nautic DC & AC,
MTe T170 E Nautic DC & AC,
MTe T190 E 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

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-12339
File No.: 899.60
Job Id.: 262.1-007792-2

Product description

Industrial TFT-Display: (E=Ethernet; T=Touch)

24VDC Monitors
MTe T150 Nautic DC
MTe T150 E Nautic DC
MTe 150 Nautic DC
MTe 150 E Nautic DC
MTe T170 Nautic DC
MTe T170 E Nautic DC
MTe 170 Nautic DC
MTe 170 E Nautic DC
MTe T190 Nautic DC
MTe T190 E Nautic DC
MTe 190 Nautic DC
MTe 190 E Nautic DC

230VAC Monitors
MTe T150 Nautic AC
MTe T150 E Nautic AC
MTe 150 Nautic AC
MTe 150 E Nautic AC
MTe T170 Nautic AC
MTe T170 E Nautic AC
MTe 170 Nautic AC
MTe 170 E Nautic AC
MTe T190 Nautic AC
MTe T190 E Nautic AC
MTe 190 Nautic AC
MTe 190 E Nautic AC

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.

Type Approval documentation

Data sheets: according international product catalogue page 36 to 56
Test Reports: Regelungs- und Messtechnik (RMS) Test Report
No. 01 - 03 / 2009, dated 2009-03-28
MeßTechnik Nord GmbH Test Report; EMC- Tests
No. 05963.0481_1.09, dated 2009-03-30
Regelungs- und Messtechnik (RMS) Test Report
No. 04 - 03 / 2009, dated 2009-04-24
MeßTechnik Nord GmbH Test Report; EMC- Tests
No. 05963.047_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, 4th 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