DNV·GL

Certificate No:
TAA00001Y1

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Personal Computer

with type designation(s)
enix-2067/3067, enix-2077/3077, enix-2087/3087 and enix-4100/41x9

Issued to
Elektronix AS
Lysaker, Norway

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft
IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and systems – General requirements – Methods of testing and required test results

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Location classes:

Temperature	**B***
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**Required protection according to relevant rules shall be provided upon installation on board**

***Tested at -15°C**

Issued at **Høvik** on **2018-07-30**

This Certificate is valid until **2023-06-30**.
DNV GL local station: **Oslo Maritime and CAP**

Approval Engineer: **Nils Jarem**

for **DNV GL**

Digitally Signed By: Nesvåg, Odd Magne
Location: DNV GL Høvik, Norway

Odd Magne Nesvåg
Head of Section

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.

Product description

Enix 2067/3067 & 2077/3077
Rating: 24V DC

Compass safe distance :	Standard compass:	45 cm
	Steering compass:	25 cm

Enix-2087
Rating: 24V DC

Compass safe distance :	Standard compass:	240 cm
	Steering compass:	150 cm

Enix-3087
Rating: 24V DC

Compass safe distance :	Standard compass:	170 cm
	Steering compass:	115 cm

Enix 4100/41x9
Rating: 100-240V AC 50/60Hz

Compass safe distance :	Standard compass:	200 cm
	Steering compass:	140 cm

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Product certificate
If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After certification the clause for software control will be put into force.

Software control
All changes in software are to be recorded as long as the system is in use on board. Documentation of major changes is to be forwarded to DNV GL for evaluation and approval before implemented on board. Certification of modified functionality may be required for the particular vessel.

Type Approval documentation

Data sheets:	enix 3077, enix 3067, enix 2077, enix 2067, enix-41X9/4100
	enix-2087, enix-3087
Manuals:	User manual enix-20xx and enix-30xx version 2.0
	User manual enix 41xx series version 2.0
	User manual enix-2087and enix-3087 version 1.2
Test reports:	E12134.05 revision 05, E13045.00 revision 00
	E14165.00 revision 00

Type approval renewal assessment report for A-14149, DNV GL Oslo 2018-06-19.

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006,
also covering IACS Unified Requirements E10 Rev.5.
Applicable tests for protected equipment according to IEC 60945, 4th edition (2002) and corrigendum 1.

Marking of product

The products to be marked with model name, manufacturer name and serial number.

Periodical assessment

The scope of the periodical assessment 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 assessment 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

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE