TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00001ZX
Revision No:
3

This is to certify:

That the General Controller

with type designation(s)
XIOS UC1, UC2

Issued to
Heinzmann GmbH & Co. KG
Schönau im Schwarzwald, Baden-Württemberg, Germany

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

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

Temperature	**B**
Humidity	**B**
Vibration	**B**
EMC	**A**
Enclosure	**A**

Issued at **Hamburg** on **2022-09-30**
This Certificate is valid until **2027-03-17**.
DNV local station: **Augsburg**

Approval Engineer: **Jens Dietrich**

for **DNV**

Joannis Papanuskas
Head of Section

Product description

Modular and flexible engine controller for combustion engines and/or power generation, monitoring system and expansion of I/O capacity.
XIOS consists of main board and additional I/O boards.

XIOS UC1 consists of:
Main Board MC
Expander Board MD1
Extension Boards MA1…MA9

XIOS UC2 consists of:
Main Board MC
Expander Board MD2
Extension Boards MA1…MA9

Programming Options:
-CoDeSys, MATLAB™

Applications:
-Digital Speed Governor
-Monitoring System
-I/O Expansion
-Generator Set Management Functions

Software:
1) XIOS Diesel / Propulsion
-Application Ship 00.64.13
-Application Generator 00.03.21
-Application Single Propulsion 00.04.21
-Application Generator with Modbus 00.63.13
-Application Master/Slave with Modbus 00.66.13
-Application Master/Slave with Modbus TCP 00.64.13
2) XIOS Genset
-Basic Software 00.00.00.

Degree of protection: IP20
Power Supply: 16…32VDC.

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.8 Electrical Installations and/or Pt.4 Ch.9 Control and Monitoring Systems.
Segregation of functions (i.e. safety functions) as required by the rules have to be observed.

The controller is not to be used for electric generator primary protection functions.

Product certificate
If specified in the above mentioned Rules the 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 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.

Tests carried out

Applicable tests according to class guideline DNV CG-0339, August 2021.

Marking of product

Manufacturer, type designation, 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 this certificate.

END OF CERTIFICATE