Certificate No:
TAA00003BM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Control and Monitoring System

with type designation(s)
SYMAP BC/BCG, SYMAP X/XG, SYMAP Y-SERIES

Issued to
Stucke Elektronik GmbH
Hamburg, **Germany**

is found to comply with
DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application :

This type approval covers security capabilities in accordance with DNV security profile 1 and IACS UR E27 (Apr. 2022), subject to conditions stated in this certificate.

Issued at **Høvik** on **2023-10-12**
This Certificate is valid until **2025-10-11**.
DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Pål Børre Kristoffersen**

for **DNV**

Jarle Coll Blomhoff
Head of Section

Product description

SYMAP® is a microprocessor-based digital protection and control device for use in low-, medium-, and high-voltage power systems. SYMAP® offers protection and control functions for generators, motors (synchronous and asynchronous), transformers, power lines, and distributions.
A LCD with optional LED indicators shows position of connected brakers, parameter settings and event history.
The programming of the device can be done with the keys on the front panel or using a laptop.

This type approval covers cybersecurity capabilities and reference architecture for:

SYMAP®, Software version: CU 1.1, MU 1.1, ComU: 1.1

Approval conditions

For each delivery of the SYMAP® to vessels with DNV class notation Cyber secure, the following information shall be submitted to demonstrate that the delivery is covered by this TA certificate:

- Reference to this Type Approval Certificate
- Inventory list
- System block diagram (topology)
- A declaration demonstrating that required security capabilities have been correctly implemented and configured in accordance with relevant approved configuration documents and “SYMAP® Cybersecurity Chapter 3”.

Any modifications in the system to be delivered compared with the type approved system covered by this certificate shall be documented and submitted for approval in each case.

A main version number is incremented from “1.x” if essential, certified functions are changed.

Major changes of the type approved system affecting future deliveries shall be informed to DNV. If the changes are considered to affect functionality for which rule requirements apply, a new functional type test may be required, and the certificate may have to be renewed to identify the new version. Minor changes are covered by this type approval.

Application/Limitation

All hardware devices and accessible interfaces in the SYMAP® systems shall be installed in areas with means to prevent unauthorised access and/or with physical access restrictions. When entering passwords on the device, other persons shall not be in line of sight.

The network connections (Modbus, CAN, Ethernet and Profinet) to SYMAP® shall be installed in areas with means to prevent unauthorised access and/or with physical access restrictions. These networks shall be dedicated to this purpose.

Type Approval documentation

Tests carried out

Applicable tests according to DNV-RU-SHIP Pt.6 Ch.5 Sec.21 edition July 2023, security profile 1.
Relevant manuals and instructions for the SYMAP® system have been verified for compliance with IACS UR E27 chapter 5.

Marking of product

The components in the type approved systems shall be marked/identified in accordance with name, model and version as listed in the document “Process Guideline Product Versioning”.

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.

A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE