

# TYPE APPROVAL CERTIFICATE

Certificate No: **TAA00002EX** Revision No:

| This is to certify:                                                                                                                              |                                                       |                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------|
| That the Electric Actuator                                                                                                                       |                                                       |                                                 |
| with type designation(s) StG EC 40, WEA 40, StG EC 250, WEA 250                                                                                  |                                                       |                                                 |
| Heinzmann GmbH & Co. KG<br>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) app<br>Temperature<br>Humidity<br>Vibration<br>EMC<br>Enclosure                                                                       | roved by this certificate is/are accepted f D B B C C | for installation on all vessels classed by DNV. |
| Issued at <b>Hamburg</b> on <b>2023-11-09</b> This Certificate is valid until <b>2024-07-09</b> . for <b>DNV</b> DNV local unit: <b>Augsburg</b> |                                                       |                                                 |
| Approval Engineer: Jens Dietrich                                                                                                                 |                                                       |                                                 |
|                                                                                                                                                  |                                                       | Joannis Papanuskas                              |
|                                                                                                                                                  |                                                       | Head of Section                                 |

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

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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.



Job Id: **262.1-017554-4** Certificate No: **TAA00002EX** 

Revision No: 2

## **Product description**

Electronic Actuators with brushless disc motor

StG EC 40 / WEA 40,

StG EC 250 / WEA 250, subtypes with different parameter settings for rotation direction and signals:

Type designation code: WEA XX-YYY-ZZZZ or StG EC XX-YYY-ZZZZ

with XX: 40 oder 250

und YYY: void or RS or RS-CW or RS-CCW or CW or CCW

und ZZZZ: void or CURR or PWM or CAN

Supply voltage ratings:

StG EC 40 / WEA 40: 24V DC (redundant)

StG EC 250 / WEA 250: 48V DC (drive), ECU: 24V DC (separate supply).

Software version StG EC 40, StG EC 250, WEA 40: xx.11.vv

Software version WEA 250: xx.11.yy

(xx: customer reference)

## Approval conditions

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 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, typical the engine manufacturer, before the system is shipped to the yard. The test shall be done according to an approved test program.

#### Tests carried out

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

# **Marking of product**

The products to be marked with:

- model name
- manufacturer name
- 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** 

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