



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA000007W
Revision No:
2

This is to certify:

That the Electronic Speed Control Units

with type designation(s)
ESD5100, ESD5200, ESD5300, ESD5500E series and Magnetic Speed Pick-ups MSP67X and MSP67XX series

Issued to

**Governors America Corp.
Agawam, MA, USA**

is found to comply with
DNV GL rules for classification – Ships

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	B
Humidity	B
Vibration	B
EMC	A
Enclosure	Required IP-protection according to DNV rules shall be provided upon installation onboard.

Issued at **Hamburg** on **2022-09-01**

for **DNV**

This Certificate is valid until **2027-08-31**.

DNV local station: **New York**

Approval Engineer: **Dariusz Lesniewski**

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Joannis Papanuskas
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.

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.



Product description

Analogue Electronic Speed Controllers, Series:
ESD5100, ESD5200, ESD5300, ESD5500E

Common features:

- Isochronous / droop operation
- Speed range: Speed range: 1...7,5kHz continuous
- Power supply: 12V or 24VDC

-ESD5200, ESD5300, ESD5500E series with over speed output contact.

Magnetic speed pickups:

MSP67X

MSP67YY

Various mechanical dimensions / threads

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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

The following documentation of the actual application is to be submitted for approval in each case:

- Reference to this Type Approval Certificate
- System block diagram
- Power supply arrangement (may be part of the System block diagram)
- List of control & monitored points

Product certificate

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

Application/Limitation

Independent over speed protection required.

Cabling/Harness: Used cables shall be free of PVC and shall comply with flame retardant requirements stated in IEC 60332-1 and for bunches IEC 60332-3.

Type Approval documentation

ESD5100 series (7-2021-F3 PIB 1000) / PTI1000 Rev D dated 8-2013
ESD5200 series (1-2021-C3 PIB 1030) / PTI1030 Rev B dated 8-2013
ESD5300 series (09-2020-H PIB 1041) / PTI1041 Rev E dated 1-2014
ESD5500E series (6-2021-F3 PIB 1002) / PTI1002E Rev B dated 8-2013
Test report BGT TB049/1996 Rev. A
Test report BGT TB051/1996 Rev. A
Test report BGT TB048/1996 Rev. A
Test report BGT TB046/1996 Rev. A
Test report Diehl Avionik Systeme TB366/03
Test report Emit Las RP 3576 F1B 95
Test report CMG 11783-1 of December 14, 2021
Test report CMG 11783-3 of December 14, 2021
Test report CMG 12059-1-2 of July 22, 2022
Test report CMG 11640-1 of July 28, 2021
Test report CMG 11640-3 of July 20, 2021
Test report CMG 12089-1 of July 22, 2022
Test report CMG 12059-1-1 of July 22, 2022

Type approval assessment report issued by Certification & Inspection Services on 2021-03-26

Tests carried out

Applicable Tests according to Class Guideline DNVGL-CG-0339, edition August 2021.



Job Id: **262.1-002277-10**
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Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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