DNV·GL

Certificate No:
TAA00002C7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Governor Control System

with type designation(s)
UG25+ P3 Actuator, UG25+ P3 Governor, UG25+ 31 Ft lb P3 Actuator, UG25+ 31 Ft lb P3 Governor

Issued to
Woodward Inc.
Fort Collins, CO, USA

is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application :

Location classes :

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

Type	Temperature	Humidity	Vibration	EMC	Enclosure
UG25+ P3 Actuator	A	B	B	A	B
UG25+ P3 Governor	A	B	B	A	B
UG25+ 31 Ft lb P3 Actuator	A	B	B	A	B
UG25+ 31 Ft lb P3 Governor	A	B	B	A	B

Issued at **Hamburg** on **2019-05-24**
This Certificate is valid until **2021-05-23**.
DNV GL local station: **Houston**

for **DNV GL**

Approval Engineer: **Jens Dietrich**

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.

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Product description

UG25+ P3 Actuator, UG25+ P3 Governor, UG25+ 31 Ft lb P3 Actuator, UG25+ 31 Ft lb P3 Governor:
Power Supply: 18 to 32 VDC, Dual Inputs
Power Consumption: Reverse polarity protection: 32W max.
Torque/Work Output (minimum):
StandardVersion:
37 Nm (27 lb-ft) stalled torque; 27 J (20 ft-lb) of work over 42 degrees
Increased Output Version:
46 Nm (34 lb-ft) stalled torque; 34 J (25 ft-lb) of work over 42 degrees
Max. Continuous Speed: 1500 rpm or 1200 rpm
Ramp-up Rate: configurable from 0.2 to 200 rpm/s
Steady State Speed Band: ±0.25% of rated speed (normal operating conditions)
Customer Connector: 30-pin Cinch connector (581-01-30-029S)
Mating Connector: Kit 6995-1092

Application/Limitation

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)

For single propulsion engine installations, total power failure to governor shall not cause engine shutdown according to Pt.4 Ch.9 Sec.2, 2. This must be ensured by engine supplier.

The Type Approval covers hardware listed under Product description.

Product certificate.
As long as the units are covered by the Type Approval, Product certificate for the governor will **not** be required according to Pt.4 Ch.9 Sec.1. Correct configuration and set up for each delivery to be tested during commisioning after installation.

Clause for application function 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. Certification of Application Functions may be required.

Tests carried out

Applicable tests according to DNV GL CG-0339, November 2016, ref. Survey Report no.: TNAUS410/41300030/skel/2006-01-27

Marking of product

Maker, type designations, serial numbers.

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