DNV·GL

Certificate No:
TAA00000ZM

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Position Controller

with type designation(s)
EPQ96-2

Issued to
DEIF A/S
SKIVE, Denmark

is found to comply with
DNV GL 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 GL.

Location classes:

Temperature	**B**
Humidity	**B**
Vibration	**A**
EMC	**A**
Enclosure	**See page 2**

This Certificate is valid until **2022-01-09**.

Issued at **Høvik** on **2017-01-10**
DNV GL local station: **Aalborg** for **DNV GL**

Approval Engineer: **Bartosz Kabak**

Odd Magne Nesvåg
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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Job Id:
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Place of manufacture

DEIF A/S
7800 Skive
DENMARK

Product description

EPQ96-2 electronic potentiometer

Digitally controlled electronic unit intended for control of electronic speed governors. The unit converts relay output from a PI controller to a control voltage/current, or PWM signal as input for the electronic speed governor.

Technical data

Output Voltage:	0…±10 VDC. Output impedance 500 Ω.
Output Current:	0…±20 mADC. Resitive load max 500 Ω.
Integrating time (2 settings):	2.5…25 s or 12.5…125 s
Resolution/ response time:	2.5 mV or 5µA RMS/ < 0.1s
PWM output:	0…6 VDC 500 Hz ±50 Hz
PWM output:	Low level 0…0.05 V; High level 5.7…6V
PWM resolution/ response time:	10 000 steps/ <0.1s
Digital output contact:	AUTO/MAN (Auto mode when closed)
Digital output contact:	STATUS OK (OK when contact closed)

DEIF application notes 4189340149 Rev.O to be observed

Protection:	IP52 (panel front), IP20 (panel rear).
Aux. voltage:	12…24 VDC
Pollution degree:	2 (anti-condensation heating required)

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems

Type Approval documentation

Tests carried out

Applicable tests according to Guidelines for the Performance of Type Approvals Chapter 2, Edition 2003.

Marking of product

Unit shall be externally marked to enable identification in accordance with the documentation and be marked with the manufacturer’s name.

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