

TYPE APPROVAL CERTIFICATE

Certificate No:
TAA000009N
 Revision No:
1

This is to certify:

That the Electric Actuator

with type designation(s)
QT50

Issued to

Eltorque AS
TRONDHEIM, Norway

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft
IEC 60945 Ed. 4 (2002-08) Maritime navigation and radiocommunication equipment and
systems – General requirements – Methods of testing and required test results

Application :

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

Location classes:

Temperature D
Humidity B
Vibration A
EMC B
Enclosure C / D

Issued at **Høvik** on **2020-12-16**

This Certificate is valid until **2026-03-07**.

DNV GL local station: **Trondheim**

Approval Engineer: **Ståle Sneen**



for **DNV GL**

Digitally Signed By: Alonso Pontes, Marta

Location: DNV GL Høvik, Norway

Marta Alonso Pontes
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 GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-021325-3**
Certificate No: **TAA000009N**
Revision No: **1**

Product description

QT50 is an electrical part-turn valve actuator for valves that demands an operating torque below 50 Nm.
Power Supply: 110–240 V AC 50/60 Hz
Operating Torque: Max. 50 Nm

Interface options as listed in table below.

Actuator	Interface boards
QT50 1.0	QT50 1.0 Digital QT50 1.0 CANopen

Firmware versions:

Interface type	QT50
CANopen (Fieldbus)	1.0.x
Digital (Open – Close)	1.0.x

Place of manufacture

Eltorque AS Verkstedsvegen 4 7125 Vanvikan Norway	Eltorque Automation (Xiamen) Co., Ltd. 5/7 Xinshidai building, No.1 Huli Da Dao, Huli District, Xiamen, Fujian Province, Postcode: 361006 China
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Approval conditions

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.

Application/Limitation

EMC in the range 2 GHz to 6 GHz according to DNVGL-CG-0339, December 2019 has not been documented. EMC up to 6 GHz must additionally be documented for installation on ships contracted for construction on or after 2022-01-01.

Type Approval documentation

[I-1] User manual: QT50, doc.no. 1321 rev. 2.0 dated 2018-09
[I-2] Data sheet: QT50 Quarter-turn actuator, rev. 2.1 dated 2016-08-09
[I-3] Drawing: QT50 Overview, rev. - dated 2015-12-02
[I-4] Nemko test report no. E15208.01, rev. 01 dated 2016-02-11
Type approval renewal assessment report for TAA000009N, DNV GL Trondheim 2020-12-01
Type approval renewal assessment report for TAA000009N, DNV GL Xiamen 2020-12-09

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.
Applicable tests for exposed equipment according to IEC 60945 Ed.4 (2002).
Tested for IP6x, IPx6 and IPx8 down to 10 m for 72 h according to IEC 60529 Ed.2.2 (2013).

Marking of product

- Actuator model name
- Interface type
- Manufacturer name
- Serial number
- Input power ratings

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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