



Certificate no.:
TAA00003VJ

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Level Control System

with type designation(s)

Eltorque Valve Remote Control and Tank Gauging and high/high-high level alarm system

issued to

Eltorque AS

TRONDHEIM, Norway

is found to comply with

DNV rules for classification – Ships Pt.6 Ch.5 Sec.21 Cyber security

Application:

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

This type approval covers security capabilities for DNV Cyber security profile level 1 (SP1) and IACS UR E27, subject to conditions stated in this certificate.

Issued at **Høvik** on **2026-09-24**

This Certificate is valid until **2028-09-23**.

DNV local unit: **East & South Norway CMC**

Approval Engineer: **Qitao Gan**



for **DNV**

Digitally signed by: Jarle Coll Blomhoff
Location: DNV Høvik, Norway

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 USD 300 000.

Product description

Eltorque Valve Remote Control and Tank Gauging and high/high-high level alarm system is designed to be used for the ship's bilge and ballast functions.

Valve remote control is for the ship valve remote control and has a local emergency control system, can achieve remote control including butterfly valve, ball valve and other 1-90 °rotating open and closed valves and other special purposes of 360° rotating open and closed valves.

Tank gauging and high/high-high level alarm system can be used to measure and alarm the liquid level of fresh water tank, sea water tank, fuel tank and four draft, etc.

The following table enlists main components comprising the system that have been type approved:

No.	Component description	Manufacturer	Type designation	OS/Software
1	Network Switch	Siemens	SCALANCE XC200, SC600	Refer to the approved F071 Inventory list – Document F071 - Inventory list for Eltorque Remote valve control and tank gauging system V1.pdf
		MOXA	EDR-8010 Series	
		Korenix	JetNet 3905 (optional)	
2	Workstation/HMI	Beijer	X2 PRO series	
		Lenovo	P360 TINY	
3	PLC	Siemens	S7-1200/1500 series; IM155-6PN (optional)	
		WAGO	750 series	

Approval conditions

Product certification requirements in accordance with DNV-RU-SHIP Pt.6 Ch.5 Sec.21 Cyber security:

When the type approved system is delivered to a vessel with class notation Cyber secure (Essential) a Product certificate is required. To acquire the Product certificate, following documents must be submitted:

1. A project-specific system topology (F030) and that this is consistent with type approved document F030 - System topology V1.0.pdf.
2. A project-specific asset inventory (F071) and that is consistent with type approved document F071 - Inventory list for ELtorque Remote valve control and tank gauging system V1.pdf.
3. A declaration (Z300) or test report (Z261) that confirms configuration and hardening of the system as per the type approved document F141 Guidelines for hardening and configuration of security capabilities.pdf. Certification testing of cyber security capabilities is not required if the delivery is fully covered by this TA certificate.

At delivery of the Cyber Security Product Certificate, the on-site testing in accordance with DNV-RU-SHIP Pt.6 Ch.5 Sec.21 is not required for the type-approved system.

If a delivered system differs from the type approved system, this shall be described and submitted for approval.

For newbuilding projects, design documents for identical deliveries to sister vessels with the same DNV project ID shall be submitted for approval in one common document transmittal.

Modifications in the software application of the system should adhere with the modification strategy (Z100) as per the type approved document Z100 Modification strategy.pdf. Major modification must be submitted to DNV for review.

Product certification requirements in accordance with other applicable DNV rules:

Additional Product certification may be required in accordance with applicable DNV requirements, e.g. DNV-RU-SHIP Pt.4 Ch.9 for control and monitoring systems.

Application/Limitation

The following conditions shall be satisfied when the system is installed and used on a vessel where the class notation **Cyber secure (Essential)** applies:

- The type approved products shall be installed in restricted areas. Access to the components shall be restricted and controlled.
- The type approved products shall be installed with the included firewall controlling all external communication.
- The type approved products shall only be connected to networks or systems explicitly illustrated in the approved system topology and shall not interface with any untrusted networks or systems outside of this scope.

Type Approval documentation

Document type	Document name
F021 - Description of security capabilities	F021_Description_of_security_capabilities.pdf
F252 - Procedure for test of security capabilities	F252 Procedure for test of security capabilities.pdf
F141 - Guidelines for hardening and configuration of security capabilities	F141 Guidelines for hardening and configuration of security capabilities.pdf
F071 - Inventory list	F071 - Inventory list for ELtorque Remote valve control and tank gauging system V1.pdf
F030 - System topology	F030 - System topology V1.0.pdf
F259 - Description of secure development lifecycle processes	F259 Description of secure development lifecy
F142 - Information supporting incident response and recovery, and F253 - Procedure for verification of security functions on board	F142 Information supporting incident response and recovery.pdf
Z100 – Specification	Z100 Modification strategy.pdf
I320 - Software change handling procedure	I320 Software change handling procedure.pdf

Tests carried out

Tested in accordance with requirements for

- DNV rules Pt.6 Ch.5 Sec.21 security profile 1 (SP1), edition 2025-07

as per the supplier's F252 document. Relevant manuals and instructions of Eltorque's management system have been verified for compliance with

- DNV-RU-SHIP Pt.6 Ch.5 Sec.21 [3.3], edition 2025-07

which is based on

- IACS UE E27 [5], Rev.1 Sep 2023 - Secure Development Lifecycle (SDLC) Requirements

as per the supplier's F259 document.

Marking of product

- Hardware devices are marked with product name and type as listed in 'Product description' above
- Software version(s) can be seen via each product's management interface

Periodical assessment

A renewal assessment will be performed at renewal of the certificate.

The scope of the renewal 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 version, 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
- Review documented evidence of adherence to Secure Development Lifecycle processes.



Job ID: **262.1-043909-1**
Certificate no.: **TAA00003VJ**

Manufactured by:

Eltorque AS
Verkstedsvægen 4
7125 Vanvikan, Norway

Eltorque Automation (Xiamen) Ltd.
Xiamen City, Fujian, China

The validity of the certificate can be checked at <https://approvalfinder.dnv.com>

END OF CERTIFICATE