CERTIFICATE NUMBER	26-0326075-PDA
EFFECTIVE DATE	01-Apr-2026
EXPIRY DATE	31-Mar-2031
ABS TECHNICAL OFFICE	Gdynia Engineering Department

CERTIFICATE OF

Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

KONGSBERG MARITIME AS

located at

POSTBOKS 483, , KONGSBERG, Norway, NO-3601

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product:	**Propulsion/Thruster Control System**
Model:	**Kongsberg K-Thrust 720 Propulsion and Thruster Remote Control System only for compliance with “Cyber Resilience” MVR 4-9-14 (2025) (IACS UR E27 Rev.1)**
Endorsements:	**CyberSecurity**
Tier:	**3 - Type Approved, unit certification not required**

This Product Design Assessment (PDA) Certificate remains valid until 31/Mar/2031 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau Of Shipping

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Tier: 3 - Type Approved, unit certification not required

Product:	**Propulsion/Thruster Control System**
Model:	**Kongsberg K-Thrust 720 Propulsion and Thruster Remote Control System only for compliance with "Cyber Resilience" MVR 4-9-14 (2025) (IACS UR E27 Rev.1)**
Endorsements:	**CyberSecurity**

Intended Service:
ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International Standards.

Description:
The K-Thrust 720 system is a flexible and scalable Propulsion and Thruster Remote Control System designed for use in a variety of marine applications.
K-Thrust 720 concept includes a range of levers, indicators, panels and controllers that can be arranged in any combination on the bridge, in the Engine Control Room and in other locations, for remote control of the propulsion, steering gear and thrusters.

This PDA covers only compliance with "Cyber Resilience" MVR 4-9-14 (2025) (IACS UR E27 Rev.1)

Rating:
Cybersecurity/resilience PDA so no ratings are applicable.

Service Restriction:
1. Unit Certification is required for this product. According to ABS MVR 4-9-14/19.1.6 and ABS MVR 4-9-3/8.3.7, a Factory Acceptance Test (FAT) must be conducted for the system and should be witnessed by an ABS Surveyor. Additionally, as outlined in ABS MVR 4-9-3/8.5.6, a System Acceptance Test (SAT) is to be conducted on board the vessel, also witnessed by an ABS Surveyor.

2. This PDA is issued to demonstrate that the subject systems meet the ABS MVR 4-9-14/15.1 Table 1 requirements, and as such, this PDA is issued with the limitation that any directly connected networks are to be only "trusted networks".

3. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

4. The Kongsberg K-Thrust 720 uses the Lenovo MC340 and MC360 stations. This PDA does not cover those components of the Kongsberg K-Thrust 720 System.

5. This PDA is issued on the contingent that the end user follows the Kongsberg Cyber Security Handling guidelines in the K-Thrust System Operator Manual.

6. During installation, defence-in-depth measures are expected to be provided by the external environment—such as physical arrangements and policies and procedures—to prevent unauthorized access to and manipulation of hardware, software, cabling, and data, as well as unauthorized changes to the network topology.
As defined in "KM-GUI-0118 Guideline for Secure Development Lifecycle".

7. Recommended configuration settings of the security capabilities as defined in "110-0053617B K-Thrust 720 CS - Description of Security Capabilities" and specific default values are needed to be provided during the installation.

Comments:
1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

2. The system in scope doesn't have wireless capability, so this PDA does not cover this aspect.

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3. The system is only to be connected to networks in the manner to satisfy IACS UR E26/E27.

4. The onboard attending surveyor is to verify that the installation of the equipment matches the setup and configuration listed in this PDA, and any modification to the hardware, software, or firmware that could significantly impact the performance of the cyber resilience capabilities shall be reviewed by ABS Engineering.

5. This PDA does not cover the software's functionality, as required by ABS MVR 4-9-3 (IACS UR E22) or the environmental/EMC performance of the system hardware, as required by ABS MVR 4-9-9 (IACS UR E10). The system's compliance with the aforementioned requirements is to be submitted for review by the system manufacturer to ABS Engineering on a vessel-specific project.

6. If the Computer Based System is allocated to a security zone, it shall be delivered with unit certification in accordance with ABS MVR 4-9-14 . This certification shall be based on approval of the documents listed below:
• Asset inventory, demonstrating consistency with type approved asset inventory.
• System topology, demonstrating system architecture and interfaces with other systems and equipment as per type approved topology.
• Test report or declaration demonstrating configuration of security capabilities as per type approved configuration document
• Relevant description of any differences in the delivered system compared with the type approved system.

7. An ABS Surveyor has witnessed the testing of the required secured capabilities dated 21-05-2024. The relevant report is available under Work Order #6424474.

Notes/Drawing/Documentation:
Drawing No. KM-GUI-9504, KM-GUI-9504_KM-GUI-9504_Guidelines_for_service_on_AIM_systems_en, Revision: 3, Pages: 10
Drawing No. KM-GUI-0118, KM-GUI-0118 Guideline for Secure Development Lifecycle _SDLC_en, Revision: B, Pages: 21
Drawing No. 110-0053615C, 110-0053615C K-Thrust 720 CS - Asset Inventory, Revision: C, Pages: 25
Drawing No. 110-0053617B, 110-0053617B K-Thrust 720 CS - Description of Security Capabilities, Revision: B, Pages: 46
Drawing No. KM-PROC-0080, KM-PROC-0080 Change management_en (1), Revision: C, Pages: 17
Drawing No. 110-0053616D, 110-0053616D K-Thrust 720 CS - System Topology, Revision: D, Pages: 12
Drawing No. 110-0053618A, 110-0053618A K-Thrust 720 CS - Test Procedure, Revision: A, Pages: 81
Drawing No. 110-0106862B, 110-0106862B K-Thrust OPM 4.2, Revision: B, Pages: 100
Drawing No. 409587C, K-Thrust 720 - Propulsion and Thruster Remote Control System, Revision: C, Pages: 44

Terms of Validity:
This Product Design Assessment (PDA) Certificate remains valid until 31/Mar/2031 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

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STANDARDS

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ABS Rules:
2026 Rules for Condition of Classification: 1A-1-4/7.7, 1A-1-3 & 1A-1-4, which covers the following:
2026 Rules for Building and Classing Marine Vessels: 4-9-14

National:
NA

International:
IACS UR E27 (Rev.1) 2023
IEC Std. 62443-3-3:2019/AC:2019-10

Government:
NA

EUMED:
NA

OTHERS:
NA