



**Work Order – WO0534273**  
**Product Design Assessment (PDA)**  
**Product: Remote Control System**  
**Model: K- Master (K-Pos, K-Thust 720, K-  
Chief, K-Safe, K-Bridge)**  
**PDA No.: 26-0534273-PDA**

Attention: KONGSBERG MARITIME FINLAND OY (WCN: 697469)

The documents shown in the attached list are reviewed in accordance with the applicable requirements indicated in the PDA along with the service restrictions and comments.

We recommend that you monitor the ABS Rules, Guides and other standards used in the Assessment. These Rules, Guides and standards often change on an annual basis, and you must comply with the new Rules, Guides and standards in order for the product to be used on an ABS classed vessel or facility contracted under the new Rules, Guides or specifications.

For any clarifications, contact Mr. Tetsuaki Miura at +81 45 441 1051, ([TMiura@eagle.org](mailto:TMiura@eagle.org)).

Very truly yours,

Junichi Nigorikawa  
Director of Engineering

Electronically Signed by: Motohiro Tamura

#### Documents List

Drawing No.	Rev. NO.	TITLE	Status
110-0055090E	E	K-Master 3.x CS - Asset Inventory	Approved
110-0057149D	D	K-Master 3.x CS - System Topology	Approved
110-0064387E	E	K-Master 3.x CS - Security Capabilities	Reviewed
110-0068347C	C	Hard Disk Manager User Manual	Reviewed
110-0082534B	B	K-Master 3.x CS - Test Procedure	Reviewed
110-0102056C	C	K-Master Operator Manual	Reviewed
110-0120081_A	A	A_Release_Notes_TCP_3_1_1	Filed by ABS for Reference Only
-	C	K-Master_CybSec_ConfigSum	Reviewed
KM-GUI-0118	B	Guideline for Secure Development Lifecycle SDL_C_en	Reviewed
KM-PRO-0120	B	Configuration Management Procedure_en	Reviewed
KM-PRO-2025	K	KM_Alerts_and_Notifications_-_Preparation_and_Distribution_Safety_Bulletin_Service_Notice_and_Information_Letter_en	Reviewed
KM-PROC-0080	C	Change_management_en	Reviewed
KM-TMPL-0218	A	Change_management_plan_template	Filed by ABS for Reference Only
-	0	PDA Application Form	Document Retained

Electronic copies of the documents, appropriately stamped, are available in the ABS MyFreedom™ Client Portal.

Include: PDA Certificate

All Documents approved by 26-0534273-PDA are listed in the attachment to the PDA certificate.



CERTIFICATE NUMBER	26-0534273-PDA
EFFECTIVE DATE	06-Jul-2026
EXPIRY DATE	05-Jul-2031
ABS TECHNICAL OFFICE	Yokohama Engineering Services

## 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:** Remote Control System  
**Model:** K- Master (K-Pos, K-Thust 720, K-Chief, K-Safe, K-Bridge)  
**Endorsements:** CyberSecurity  
**Tier:** 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 05/Jul/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

Motohiro Tamura,Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

## KONGSBERG MARITIME AS

POSTBOKS 483

KONGSBERG

Norway NO-3601

Telephone: +47 81 57 37 00

Fax:

Email: geir.gjertsen@km.kongsberg.com

Web: www.km.kongsberg.com

### Tier: 5 - Unit Certification Required

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**Product:** Remote Control System  
**Model:** K- Master (K-Pos, K-Thust 720, K-Chief, K-Safe, K-Bridge)  
**Endorsements:** CyberSecurity

#### Intended Service:

ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules and International standards. Automation & Control, Thruster control, Position & Maneuvering System.

#### Description:

This PDA for K- Master only for compliance with "Cyber Resilience" MVR 4-9-14 (2026) (IACS UR E27 Rev. 1 September 2023)".

#### Rating:

Cyber security/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) shall be conducted for the system and should be witnessed by an ABS Surveyor.
2. This PDA is issued to demonstrate that the K- Master 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. Recommended configuration settings of the security capabilities as defined in "Guideline for System Integrators" and specific default values are needed to be provided during the installation.
4. The verification of the system capabilities has not been witnessed by an ABS Surveyor during the PDA process. ABS Surveyor is to witness tests to verify the security capabilities of the system to be delivered. The tests are to be carried out in accordance with the ABS Engineering reviewed test procedure during the Factory Acceptance Test of the system.
5. This PDA does not cover the software's functionality, as required by ABS MVR Section 4-9-3 (IACS UR E22) and the environmental/EMC performance of the system hardware, as required by ABS MVR Section 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. When delivering the control system using this PDA, the following documents must be submitted to ABS engineering for review as per ABS MVR 4-9-14/19.1.6.
  - 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 the type-approved configuration document.
  - Relevant description of any differences in the delivered system compared with the type-approved system.
  - Evidence that the equipment has either a valid PDA or test report pertaining to the equipment environmental/EMC performance of the system hardware, as required by IACS UR E10.
7. Any modification to the approved asset inventory, network topology, software or firmware that might have a significant impact on the performance of the cyber resilience capabilities, or the system function must be reviewed by ABS Engineering.
8. The onboard surveyor is to verify that the installation of the equipment is the same setup and configuration as listed in this PDA.

#### Comments:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) Unless specially directed by Administration, this approval is not to be construed as a substitute for flag Administration's approval.

#### Notes/Drawing/Documentation:

Drawing No. 110-0055090, Asset Inventory, Revision: E, Pages: 17, dated 4 September 2025;

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KONGSBERG

Norway NO-3601

Telephone: +47 81 57 37 00

Fax:

Email: geir.gjertsen@km.kongsberg.com

Web: www.km.kongsberg.com

**Tier: 5 - Unit Certification Required**

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Drawing No. 110-0057149, System Topology, Revision: D, Pages: 8, dated 23 May 2025;  
Drawing No. 110-0064387, Security Capabilities, Revision: E, Pages: 40, dated 4 September 2025;  
Drawing No. 110-0082534, Test Procedure, Revision: B, Pages: 43, dated 2 June 2025;  
Drawing No. --, K-Master Operator Manual, Revision: C, Pages: 230, dated August 2025;  
Drawing No. 110-0120081, Release Notes K-Master 3.2.0/TCP System 3.1.1, Revision: A, Pages: 16,;  
Drawing No. --, Configuration Software User Manual: K-Master, Revision: C, Pages: 18, dated 16 September 2025;  
Drawing No. KM-GUI-0118, Guideline for Secure Development Lifecycle (SDLC), Revision: B, Pages: 21,;  
Drawing No. KM-PRO-0120, Configuration Management Procedure, Revision: B, Pages: 16,;  
Drawing No. KM-PRO-2025, KM Alerts and Notifications, Revision: K, Pages: 14,;  
Drawing No. KM-PRO-0080, Change Management, Revision: C, Pages: 17,;  
Drawing No. KM-TMPL-0218, Change Management Plan- template, Revision: A, Pages: 6,;  
Drawing No. --, Hard Disk Manager User Manual, Revision: 17, Pages: 101,;

**Terms of Validity:**

This Product Design Assessment (PDA) Certificate remains valid until 05/Jul/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.

**STANDARDS**

**ABS Rules:**

2026 Rules for Conditions of Classification – 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, which covers the following:  
2026 Rules for Building and Classing Marine Vessels: 4-9-14;

2025 Rules for Conditions of Classification – Offshore Units 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, which covers the following:

2026 Rules for Building and Classing Offshore Units: 4-3-4/6;

2026 Rules for Conditions of Classification – Light and High-Speed Craft 1C-1-4/11.9, 1C-1-A2, 1C-1-A3, which covers the following:

2026 High-Speed Craft: 4-7-7/5.7;

**National:**

NA

**International:**

IACS UR E27 (Rev.1 Sep. 2023)

**Government:**

NA

**EUMED:**

NA

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KONGSBERG

Norway NO-3601

Telephone: +47 81 57 37 00

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Web: [www.km.kongsberg.com](http://www.km.kongsberg.com)

**Tier: 5 - Unit Certification Required**

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**OTHERS:**

NA