Type Approval Certificate

KR KOREAN REGISTER

[Safety Control and Monitoring System with Cyber Resilience]

Initial Approval	13 June 2025
Manufacturer	Kongsberg Maritime AS (HQ)
	Kirkegardsveien 45, NO-3616 Kongsberg, Norway

Product Description   Type: K-Thruster 720

- Application : Trusted network only

″ See Appendix 1 ″

Approval Condition   ″ See Appendix 1 ″

THIS IS TO CERTIFY that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems
IACS UR E27 Rev.1 Cyber Resilience of On-board Systems and Equipment

This Certificate is valid until 12 June 2030

Issued at Busan, Korea on 13 June 2025

This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "http://e-cert.krs.co.kr" by using the tracking No(ME25025215127) and certificate No.(CPH03795-CS002).

KOREAN REGISTER

General Manager of
Marine & Ocean Equipment Team

Product Description and/or Approval Condition

Date of Issue : 13 June 2025

A. Product Description

1. Product Specification

1) The KONGSBERG Thruster, Propulsion and Steering Remote Control System (K-Thrust 720) is an integrated control system for monitoring and control of main propulsion, thrusters and steering gears.

2) Hardware components

Name	Description	TA Cert no.
MC340 i3	PC computer, Lenovo, ThinkStation P340 Tiny, 110-0028204	GZU41200-AC002
MC340 i7	PC computer, Lenovo, ThinkStation P340 Tiny, 477554	GZU41200-AC002
MC360 i3	PC computer, Lenovo, ThinkStation P360 Tiny, 110-0016256	NYK47060-AC001
MC360 i5	PC computer, Lenovo, ThinkStation P360 Tiny, 110-0016258	NYK47060-AC001
MC360 i7	PC computer, Lenovo, ThinkStation P360 Tiny, 110-0016259	NYK47060-AC001
RCU502i	Controller, Kongsberg, 421768	CPH03795-AC009
RCU601	Controller, Kongsberg, 477601	CPH27937-AC003
RCU602	Controller, Kongsberg, 383962	CPH03795-AC009
C1000-24T-4X-L	Managed switch, Cisco, 110-0001617	-
C1000-24FP-4G-L	Managed switch, Cisco, 110-0009583/469123	-
C1000-24T-4G-L	Managed switch, Cisco, 469125	-
C1000-24P-4G-L	Managed switch, Cisco, 492517	-
IKS-6728A	Managed switch, Moxa, 382427	-
EDS-408A-MM-SC	Managed switch, Moxa, 467615/450144	-
EDS-408A-3M-SC	Managed switch, Moxa, 467615/46916	-
FGR-60F	Firewall, Fortinet, 110-0020955	-
L2C	LAN to CAN Gateway, Kongsberg, 404654	CPH03795-AC009
SFP module	SFP (small form-factor pluggable transceiver) module, Moxa, 388849/399666/424338	-
IM-6700A series	Managed switch, Moxa, 402107	-
K-TRUST AZIMUTH W/Display	Lever, Kongsberg, 405846	CPH03795-AC009
K-TRUST AZIMUTH	Lever, Kongsberg, 416533	CPH03795-AC009
Lever K-Thrust Single W/Display	Lever, Kongsberg, 405842	CPH03795-AC009

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Date of Issue : 13 June 2025

Name	Description	TA Cert no.
Lever K-Thrust Single	Lever, Kongsberg, 416531	CPH03795-AC009
Lever K-Thrust Dual W/Display	Lever, Kongsberg, 405844	CPH03795-AC009
Lever K-Thrust Dual	Lever, Kongsberg, 416532	CPH03795-AC009
LTU11	Lever, Kongsberg, 364330	CPH03795-AC009
LTU11 ME	Lever, Kongsberg, 389505	CPH03795-AC009
Mini Wheel K-Thrust W/Display	Mini Wheel, Kongsberg, 412364	CPH03795-AC009
Mini Wheel K-Thrust	Mini Wheel, Kongsberg, 417835	CPH03795-AC009
Command Panel	Panel, Kongsberg, 406412	CPH03795-AC009
Lever Display	Panel, Kongsberg, 416534	CPH03795-AC009
Wiring Panel	Panel, Kongsberg, 345857	CPH03795-AC009
Wiring Controller	Panel, Kongsberg, 345847	CPH03795-AC009
MPP (Multi Purpose Panel)	Panel, Kongsberg, 8100290	CPH03795-AC009
PBT (Push Button Telegraph)	Panel, Kongsberg, 8100278/8100318/8100333	CPH03795-AC009
RSER200-4	IO Module, Kongsberg, 603444	CPH03795-AC009
RHUB200-5	IO Module, Kongsberg, 603442	CPH03795-AC009
RMP201-8	IO Module, Kongsberg, 324400	CPH03795-AC009
RMP420	IO Module, Kongsberg, 306712	CPH03795-AC009
RDIOR420	IO Module, Kongsberg, 306713	CPH03795-AC009
MEI	IO Module, Kongsberg, 8100276	CPH03795-AC009
RIO-C2	IO Module, Kongsberg, 333346	CPH03795-AC009
EFI-16	IO Module, Kongsberg, 321492	CPH03795-AC009
PB4	Push Button, Kongsberg, 400992	CPH27937-AC001
PB 4 Momentary	Push Button, Kongsberg, 110-0033305	-
CC100A	CAN switch connector module, Kongsberg, 396504	CPH03795-AC009
CC100B	CAN switch connector module, Kongsberg, 396633	CPH03795-AC009
CS100	CAN switch, Kongsberg, 396502	CPH03795-AC009

3) Software version : 4.2.x

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2. Approved Drawings and Documents
1) Approved documents
- CBS asset inventory : 110-0053615 Rev.C
- Topology diagrams : 110-0053616 Rev.D
- Description of security capabilities : 110-0053617 Rev.B
- Test procedure for security capabilities : 110-0053618 Rev.A
- Secure development lifecycle : KM-GUI-0118 Rev.A

3. Test Reports, etc.
1) Test Reports No.
- 110-0066078 Rev.C
- 110-0056698 Rev.E
2) Etc.
- Security configuration guidelines : 110-0094608 Rev.A
- Plans for maintenance and verification : KM-PROC-0057 Rev.H
- Information supporting incident response and recovery plans : 441551 Rev.D, 110-0068347 Rev.C, KM-GUI-9504 Rev.3, KM-GUI-9505 Rev.E
- Management of change plan : KM-PROC-0080 Rev.B

B. Approval Condition

1. Application & Limitation
1) This approval is granted on the basis of the approved documentation and the test reports (IACS UR E27 Rev.1).
2) This system is not to be connected to the untrusted network.
3) The manufacturer is to inform this Society of all kinds of revisions of the equipment including software. If the changes are recognized to affect the functionality of the approved equipment, a type test to confirm the reliability of the revised equipment may be performed in the presence of our surveyor.

2. Individual Product Cert. and Drawing Approval Requirement
1) Individual Product Certification is not required according to Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems.
2) In the case where this system is installed on board, below documents for individual vessel are to be submitted to this Society according to Ch. 3 of the Guidance for Cyber Resilience of Ships and Systems.
- Approved documents
  · CBS asset inventory
  · Topology diagrams
- Reference documents
  · Cyber resilience test reports

3. Marking
N/A

4. Others
N/A

< End of Certificate >