

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB000008G
Revision No:
10

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

that the Heading control system (HCS)

with type designation(s)
K-Pos Heading Control System

issued to

Kongsberg Maritime AS
Kongsberg, Norway

is found to comply with the requirements in the following Regulations/Standards:

Regulation (EU) 2025/1533,

item No. MED/4.16. SOLAS 74 as amended, Regulations V/18 & V/19, IMO Res. A.342(IX), IMO Res. A.694(17),
IMO Res. MSC.191(79), IMO Res. MSC.64(67) Annex 3, IMO Res. MSC.302(87)

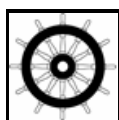
Further details of the equipment and conditions for certification are given overleaf.

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

Issued at **Høvik** on **2025-12-04**

DNV local unit:
East & South Norway CMC

Approval Engineer:
Tommi Juhani Rifaat



Notified Body
No.: **0575**



for **DNV AS**

This document has been digitally signed and will
therefore not have handwritten signature

Mydlak-Röder, Christine
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2023 dated August 21st, 2023.



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

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 300,000 USD.



Product description

K-Pos Heading Control System consisting of the following components:

Main processing unit (one of the following):

- DPC Dynamic Positioning Controller with process unit(s) RCU601 or RCU602
- cC Compact Controller with process unit RCU601 or RCU602

Operating Station/Terminal (at least one of the following):

- K-Pos OS Operator Station for K-Pos DP/DPM/PM
- K-Thrust OS Operator Station as part of Thruster Control
- K-Master Integrated Operator station for K-Pos DP
- cJoy DP-OT Additional Operator Terminal in K-Pos DP
- cJoy OT Operator Terminal in cJoy Joystick system

Certificate TAA00003DB for K-Pos systems in its latest revision at the date of placing the system on the market is part of this certificate. For the relevant revision see also <https://approvalfinder.dnv.com>

Software modules:

- DP basis release 8.5, update 3 onwards
- K-Master release 3.1, update 0 onwards

Applications/Limitations

- The Operating system is MS Windows 10.
- The equipment is tested according to requirements for environmental category "protected" as defined in IEC 60945.
- The K-Pos Heading Control System are to be installed according to manufacturer's installation manuals.
- This certification is limited to Autopilot - Heading mode.

Type Examination documentation

DNV No	Drw No	Rev	Title
10578	110-0121780	B	Report: Kongsberg, Type Approval Presentation tests Test Report
10577	110-0066744	D	Manual: Kongsberg, K-Pos DPM OPM
10576	TAA000003DB	0	Certificate: DNV, Kongsberg K-Pos - Hardware Platform
10575	110-0075666	A	Doc: Kongsberg, Release Notes K-Master 3.1.0 / TCP System 3.1.0
10574	110-0053323	A	Manual: Kongsberg, K-Pos DP Control system Product Description
10573	110-0021993	A	Manual: Kongsberg, cJoy Operator Terminal MK4 Maintenance Manual
10572	110-0019172	A	Manual: Kongsberg, cJoy Operator Terminal MK4 Installation Manual
10570	110-0124429	A	Manual: Kongsberg, Display distances Installation Manual
10569	110-0102056	B	Manual: Kongsberg, K-Master Operator Manual
10568	110-0071432	A	Manual: Kongsberg, cWing Remote Wing Terminal Operator Manual
10567	110-0066864	B	Manual: Kongsberg, cJoy DP-OT DP Operator Terminal Operator Manual
10566	110-0066863	B	Manual: Kongsberg, IJS Independent Joystick System Operator Manual
10565	110-0066726	A	Manual: K-Pos Autopilot Mode Operator Manual
10564	110-0066721	D	Manual: Kongsberg Dynamic Position System Operator Manual
10563	110-0107044	A	Doc: Kongsberg, Update Notes DP basic 8.5.3
10562	110-0059786	B	Doc: Kongsberg, Release Notes DP 8.5.0
10556	110-0044149	A	Report: KM Test Report HCS Compliance Tests cJoy Mk4
10555	110-0041444	A	Drawing: Independent Joystick System - IJS - topology
10554	110-0041441	A	Drawing: K-Pos DP-2 system Topology
10553	448540	K	Hardware List: K-Pos system
10552	110-0019172	A	Manual: KM cJoy Operator Terminal MK4 Installation manual

DNV No	Drw No	Rev	Title
10551	110-0013799	A	Manual: KM cJoy Operator Terminal MK4 Hardware module description
10515	467343	A	Manual: KM Power distribution, OS Desktop Maintenance manual
10493	482684	A	Report: KM, TA BAM compliance tests K-Pos Autopilot (HCS)
10476	400361	B	Installation manual: cJoy Operator Terminal Junction Box
10475	486666	B	Installation manual: cWing Mk3
10474	177957	D	Installation manual: cWing Junction Box for Wing Terminal
10473	475356	B	Installation manual: cC-1 Controller
10472	302188	H	Installation manual: DPC-1 and DPC-2 Cabinets
10471	302196	H	Installation manual: DPC-3 Cabinet
10470	TAE00003WA		Certificate: DNVGL, TA certicate for enclosure
10469	300966	F	Interface Manual: K-Pos Serial lines, Interface specification
10468	300970	B	Interface Manual: Standard RIO200, Loop Typicals
10467	300968	C	Interface Manual: RIO200 Based Systems, Interface Requirements
10466	482685	B	Report: KM, K-Pos Autopilot (HCS) TA Performance Tests
10443	475430	A	Maintenance Manual: cC-1 Controller
10440	462729	B	Maintenance Manual: KM, K-Master Server Cabinet MK2 (using MC340)
10432	MRA000002D	2	Certificate: DNV, MRA certificate for Hatteland Series E MMC Standard and Compact computers, KM Doc. No. 463254/C
10429	E19179.01	01	Report: Nemko, EMC and environmental test report for computer adapters (DisplayPort 1.2 to 3-Port video splitter, EX-1330M Ethernet adapter, EX-1163HM USB Hub, EX-1339HMVS USB to 8-port RS-232/422/485)
10405	E17254.00	00	Report: Nemko, EMC emission tests for KM18, KM Doc. No 428578/A
10394	MRA000000H	5	Certificate: DNV, MRA certificate for DuraMON 19/24/26/27/32 GLASS, KM Doc. No. 429106/E
10393	MRA000001B	1	Certificate: DNV, MRA certificate for DuraMON 55 GLASS, KM Doc. No. 426136/B
10364	MRA000000S	3	Certificate: DNV, MRA certificate for ISIC Monitors, KM Doc. No. 421626/C
10360	423726	D	Maintenance Manual: KM, K-Master FWD Bridge Workstation MK2, Built-in
10359	423725	A	Maintenance Manual: KM, K-Master Workstation MK2
10335	416664	A	Report: KM, BAM interface (SW, BAM interface support)
10329	416662	A	Report: KM, Presentation testing, IEC 62288 (2014), K-Master 2.1.0
10328	416661	A	Report: KM, Presentation testing, IEC 62288 (2014), DP Basis 8.3.0
10276	100984-1	18	Statement: Hatteland, IEC 60945 compliance for K-Master 13,3" and 8" TCP's, KM Doc no 368641/D
10275	300967	H	Interface Manual: KM, K-Pos
10259	350434	B	Product Description: KM, Kongsberg K-Master Work Station
10239	391978	B_FTR	Report: KM, K-Pos HCS with K-Master Chair/Workstation, Test Report
10238	391976	B_FTR	Report: KM, K-Master FWD Bridge Fallback Modes and Effects, Test Report
10235	394658	A	Statement: KM, K-Master joystick test statement (K-Master 1 and 3 button joystick)
10234	391778	A	Statement: KM, K-Master console test statement (KMX FWD Centre Console)
10233	391995	B	Statement: KM, K-Master Pilot Chair test statement (K-Master Pilot Chairs)
10228	349793	D	Hardware Module Description: KM, K-Master Touch Control Panel 13.3" HD 13T21 KMD-DR1-CORx
10227	348032	C	Hardware Module Description: KM, K-Master DP Joystick
10226	348031	A	Hardware Module Description: KM, K-Master DP and IJS Joystick
10225	348029	C	Hardware Module Description: KM, K-Master I/O Controller
10224	348024	A	Hardware Module Description: KM, K-Master Heading Wheel
10223	348019	B	Hardware Module Description: KM, K-Master Alarm Panel

DNV No	Drw No	Rev	Title
10222	391204	A	Hardware Module Description: KM, USB Extender VL-66199-T/R
10218	387155	C	Maintenance Manual: KM, K-Master Pilot Chair
10216	368822	B	Statement: KM, K-Master Workstation, Vibration Test Statement
10211	E11024.03	03	Report: Nemko, EMC and environmental test report for K-Master Panel System, KM Doc. No 357261/B
10209	E12059.00	00	Report: Nemko no. E12059.00 (K-Master Bridge Chair), KM Doc. No 370398/A
10208	2011-3416	01	Report: DNV, EMC and environmental test report of HD13T21 KMD-DR1-CORP, KM Doc. No 368647/A
10196	3010-09-0221	2010-01-21	Report: TI, Vibration test of K-Master Chair, KM Doc. No 368683/A
10154	3000-14-016067	2014-03-12	Report: TI, Environmental test report for KMX Pedestall 300, KM Doc. No. 391796/A
10153	3000-14-016343	2014-03-20	Report: TI, Environmental test report for KMX Medium-800 Console, KM Doc. No. 391795/A
10152	3000-14-015548	2014-03-12	Report: TI, Environmental test report for K-Master Pilot Chair, KM Doc. No. 391780/A
10088	302152	E	Drawing: KM, General Arrangement DPC-3 Cabinet
10042	302199	E	Drawing: KM, General Arrangement DPC-1 / 2 Cabinet
10032	174026	D_FTR	Report: KM, DP Autopilot, I/O Test report

Tests carried out

- Performance testing: ISO 11674 (2019)
- Environmental testing: IEC 60945 (2002) Inc. Corr.1(2008)
- Serial interface testing: IEC 61162-1 (2016)
- Presentation of navigation information: IEC 62288 (2021)
- Bridge Alert Management: IEC 62923-1 (2018) and IEC 62923-2 (2018)

Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to the product. In addition the product shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.