



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA22252M

**This is to certify** that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use” and the relevant Society's Rules.

This certificate is issued to

Manufacturer: **Kongsberg Maritime AS**  
Place of Manufacturing: **Kirkegårdsveien 45, Carpus, P. O. Box 483, NO-3601 Kongsberg, Norway**  
**Bekkajordet 8, NO-3189 Horten, Norway**  
**Søndre Kullerød 1, NO-3241 Sandefjord, Norway**

Product description: **Dynamic Positioning Control System**  
**Position Mooring Control System**  
**Combined Dynamic Positioning and Position Mooring System**  
**Independent Joystick Control System**

Model: **K-Pos DP, K-Pos PM, K-Pos DPM, cJoy**

Approval No.: **11A015**

Valid until: **31 December 2026**

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 26 April 2022.

  
  
S. Oishi  
General Manager  
Machinery Department

Note: (1) : The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

**Specification & documents:**

1. Ratings : Power Supply 115/230V AC, (DP controller; 24V DC version available for cC-1)

2. Components and reference documents :

2.1 General information

- (1) Publishing History .....CDQM-0010\_Publishing\_History\_O
- (2) Contents .....CDQM-0010\_WebDoc\_Content\_O
- (3) K-Pos and cJoy Maintenance Manual .....CDQM-0010\_WebDoc\_Content\_O
- (4) K-Pos DP and cJoy Maintenance Information .....TA-KPOS-2006-MI\_A
- (5) cJoy System Maintenance Information .....308634F

2.2 Product descriptions and Operator manuals

Components	Document No.	Remarks
K-Pos DP	301093B (Product description)	
	436094E, 436102D, 436103E, 436104B, 436106B, 436114A, 436111C, 436113C, 436115A, 436117C, 436118C, 436110C, 436107D, 436108G, 436109D, 436120A, 436112A, 441048B, 441472E, 436119C	DP Basis 8.4.5 (8.4.x)
K-Pos PM	301094B (Product description)	
	436096E	DP Basis 8.4.5 (8.4.x)
K-Pos DPM	301094B (Product description)	
	436095E	DP Basis 8.4.5 (8.4.x)
cJoy	177332F (Product description)	
	436099D, 436098D, 436105C	DP Basis 8.4.5 (8.4.x)
cWing / cWing Mk3	436100B, 489619B	DP Basis 8.4.5 (8.4.x)

2.3 Documents of Operator Stations with WS (Widescreen) display

Components	Document No.	Remarks
MC330 Computer [ThinkStation P330 Tiny] and Peripherals	[MC330 Computer] 450174B, 457749B, 459233B, 459234B	NK Approval No.19A046
	[MC340 Computer] 479386B, 479684A, 479384A, 481031A	NK Approval No.21A009
MC340 Computer [ThinkStation P340 Tiny] and Peripherals	[Peripherals / Adapters] 463286A, 463283A, 463242A, 421168D, 464068A, 464069A, 463482A, 463483A	
KM18	430120E, 450167B, 450176B, 450177B	
KM05	450347A	
Power Distribution	450169D, 436716B, 463521C	
Operator Panel Systems	450171E, 444002C	
Display	450173C	

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## 2.4 Documents of Controllers

### 2.4.1 Documents of Controllers

Components	Document No.	Remarks
cC-1 Controller (cC: Compact Controller)(MK2)	475430A	
DPC-1 (DPC: Dynamic Positioning Controller)	303996I, 302199B	
DPC-2 (DPC: Dynamic Positioning Controller)	303997M, 302199B	
DPC-3 (DPC: Dynamic Positioning Controller)	303998L, 302152B	

### 2.4.2 Documents of DP controllers (Interface manual)

Components	Document No.	Remarks
K-Pos	300967H	
K-Pos Serial Lines	300966F	
RIO200 Based Systems	300968C	
Standard RIO200 Loop Typicals	300970B	

- To be continued -

2.5 Hardware Module Descriptions

Components		Document No.	Remarks
Converter modules	L2C, LAN to CAN Gateway (Data Sheet)	409453C	
	CAN2DP	301505A	
	Moxa NPort 5200 Serial Device Servers	318636E	
HMI modules	cJoy Operator Terminal MK3	399517C	
	cWing Wing Terminal	178006F	
	cWing Mk3	486667A	
	COP-05 ALC Panel	300977B	
	COP-05 BU-DP Panel	300983B	
	COP-05 Input Panel	300984D	
	COP-05 Heading Wheel Panel	300985B	
	COP-05 Joystick Panel (Kwant Controls KC 06-K)	307003B	
	COP-05 Standalone Trackball	338386A	
	Display 27" FHD ECDIS G/GT MK2	445079A	
	Display 27" FHD ECDIS KM05 MK4	445069A	
	Display 27" FHD ECDIS S MK4	445067B	
	Display 32" FHD ECDIS MK1	404731A	
	Display 55" UHD ECDIS MK1	404720A	
Junction boxes	cJoy Operator Terminal Junction Box MK3	400360C	
	cWing Junction Box for Wing Terminal	178007F	
Network modules	Moxa Switch EDS-316 Series	352676D	
	Moxa Switch EDS-205A Series	343879D	
	Patch panel 4/8 port, CAT 6a Installation Manual	441847C	
	Patch panel 19" 24 port, CAT 6a	441843A	
	Moxa IKS-6726A/6728A Series	439059A	
	Moxa Port Interface IM-6700A Series	439061B	
	Moxa SFP modules	440212A	
	Cisco 890 Series Integrated Service Routers	417159C	
	Switch Cisco 2960	463194A	
	SFP 10/100/1000Mb, RJ45, Cisco	466703A	
	SFP 1000Mb, 1310nm, SM/MM, Cisco	466704A	
	SFP 1000Mb, 850nm, MM, Cisco	466706A	
	SFP+ 10Gb, 850nm, MM, Cisco	466718A	
	SFP+ Copper cable, 1m, Cisco	466719A	
	SFP+ Opt. cable, 850nm, MM	466721A	
Power modules	Power Quint-PS 24DC/24DC/10A (part no. 387116) Data Sheet	482501A	
	Phoenix Contact QUINT-PS/1AC/24DC/10	326403B	
	PSU TRIO-PS-2G/1AC/24DC/5/B+D (Data Sheet)	449192A	
Remote I/O modules	RCU602	408644C	
	RHUB200-5	300994F/G	
	RMP201-8	330111C	
	RSER200-4	300993J	

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### 3. Software:

Software version: DP Basis release 8.4, update 5 onwards

Update Notes for DP Basis 8.4.5 (Document No. 482205A)

### 4. Test Report etc.:

#### KM Modules

(1) Nemko no. E21088.03 (order no. 431211) (487708\_03)

(2) KM module Declaration of Identity (DoI) with statements for ENV test report (482250A)

(3) KM-module test status table IACS E10 (482249A1)

(4) Test Report Flame Retardant: Nemko no. E18040.01 (order no. 342816, 431211) (469729\_01)

#### KM-05 Operator Station (Deep Line)

(1) DELTA Test Report DANAK-198575 Project No. A504273-3 (307741A)

(2) DELTA Test Report DANAK-198577 Project No. A504327-2 (308039A)

#### KM18 Console Range

(1) KM18 Console Range, Environmental test summary (445161B)

(2) Test Report: Nemko E17254.00 (EMC) (KM18) (428578A)

#### KM Common Operator Panels 2005 (COP-05)

(1) DELTA Test Report DANAK-198195Rev.1 Project No. A503298-1 (15 June 2007)(A503298-1\_1)

(2) Environmental Test Report Joystick KC 06 Thales Doc. Ident. 9501 029 033XX 001 (22-11-2006)

(3) DELTA Test Report DANAK-1910612Rev.B Project No. A506311-1 (KM338108)

(4) DELTA Test Report DANAK-1910979 Project No. A506924-1 (13 July 2010)

- To be continued -

4. Test Report etc.:

MC330 (ThinkStation P330 Tiny) and MC340 (ThinkStation P340 Tiny)

(1) NK Approval No.19A046 and 21A009

—Associated adapters, part 1

(1) Test Report: Nemko no. E19179.01, Computer Adapters

—Additional adapters, part 2

(1) Test Report: Nemko no. E20096.02 (order no. 398223), Computer Adapters

—Additional associated adapters

(1) Certificate No. MRA000002D Rev.2 (EU-RO-MR-TA-Certificate that include accessories «HT00262 OPT-A1» and «HT00263 OPT-A1») (Rev.2 issued 2022-01-31)

Display 27" FHD ECDIS S MK4, Display 27" FHD ECDIS KM05 MK4, Display MD24 16:9 MK3

(1) Certificate No. MRA000000S Rev.3 (EU-RO-MR-TA-Certificate)

Display 27"/32" FHD ECDIS G MK1

(1) Certificate No. MRA000000H Rev.5 (EU-RO-MR-TA-Certificate for DuraMON 27 GLASS and DuraMON 32 GLASS)

Display 27" FHD ECDIS G MK2

(1) Certificate No. MRA000000H Rev.5 (EU-RO-MR-TA-Certificate for DuraMON 27 GLASS)

Display 55" UHD ECDIS G MK1

(1) Certificate No. MRA000001B Rev.1 (EU-RO-MR-TA-Certificate for DuraMON 55 GLASS)

(2) Supplementary Test Report, EKTOS:P21-01610 dated 2022-03-14

DP Controller

(1) DELTA Test Report DANAK-198307 Rev.1 Project No. A503711 (3 April 2006)

(2) Certificate No. TAE00003WA (Include Compact Enclosure AX)

RSER200-4, RHUB200-5

(1) DELTA Test Report DANAK-198508 Project No. A503547-1 (17 October 2006)

(2) Nemko no. E22067.01 (order no. 462723) (RHUB200-5 Rev.1 and RMC-ST) dated 2022-04-20

(3) Nemko no. E21059.03 (order no. 430876) (RHUB200-5 Module) dated 2021-06-24 (482733\_03)

RCU602

(1) Test Report: Nemko no. E15165.01 (RCU602 and RMC-ST)

4. Test Report etc.:

RMP201-8

(1) Environmental tests for RMP201-8 based upon RMP200-8 (332991A)

Moxa NPort 5200 Serial Device Servers

(1) Certificate No. TAA000006T Rev.4

cJoy OT MK 3 (for MS WIN7 / WIN10)

(1) Test Report: TI 3000-14-018241 Rev.- (cJoy Operator Terminal MK3 WIN7)

(2) Nemko no. E15210.01 (order no. 292973) (cJoy and cWing) dated 2015-11-18 (412562\_01)

cWing (upfront Mk3)

(1) Environmental Verification Test cWing and cJoy Report No. 310-04-0125A (16.03.05)

(2) NEMKO Test Report – EN60945, Corrosion Test (cWing) (32743\_1)

—Additional Tests related to IEC 60945 (8.2, 8.4, 10.3 and 10.4)

(1) Environmental Test cJoy, cPos & cWing Functional Test Procedure (179130B)

(2) Environmental Verification Test, Additional Tests on cWing, cJoy, cPos (3010-05-0121)

(3) NEMKO Test Report – Electromagnetic Compatibility (cJoy/cPos/cWing) (41813Rev.1)

—Test for CAN2DP Converter

(1) DELTA Test Report DANAK-198632 Project No. A503547-4 (309493A)

—Additional Tests for cJoy (MK 1/2) and cWing

(1) NEMKO Test Report – Report No. E09815.03 (140487\_TRF\_MAR\_rev3)

cWing Mk3

(1) NEMKO Test Report – Report No. E21240.00 (cWing Mk3 and Junction Box)

—Test for CAN2DP Converter

(1) DELTA Test Report DANAK-198632 Project No. A503547-4 (309493A)

—Test for L2C Converter

(1) DELTA Test Report DANAK-19/16085 Rev.A (L2C)

Alarm Printer

—Canon LBP623Cdw (KM version for bridge)

(1) Test Report: NEMKO Order no. 379788 (EMC; Canon LBP623Cdw)

—OKI ML 280 ECO (KM version for bridge)

(1) Test Report: NEMKO Order no. 378649-2 (EMC; OKI ML 280 ECO)

4. Test Report etc.:

Screen Capture Printer

—Canon LBP623Cdw (KM version for bridge)

- (1) Test Report: NEMKO Order no. 379788 (EMC; Canon LBP623Cdw)

Network Switch

—Cisco 2960 Switch (for NDU)

- (1) Test Report: MS Testing, TL20007, CISCO WS-C2960L-24TS-LL V02 Switch

- (2) Test Report: MS Testing, TL20006, CISCO WS-C2960L-24TQ-LL V01 Switch

—Moxa Ethernet Switch IKS-6728A-4GTXSFP-HV-HV-T (+ interfaces and modules)

- (1) Test Report: MS Testing, TL15055 Issue 5 (Moxa, Managed Ethernet Switch)

- (2) NK Approval No. 15A041

—Moxa EtherDevice(TM) Switches (including EDS-316)

- (1) Certificate No. TAA000006K Rev.3 Moxa EtherDevice(TM) Switches

- (2) Test Report: EMC, DEKRA: 2110223R-E3012300001 V1.0 (IACS E10 Rev.7)

—Moxa Ethernet Switches (including EDS-205A)

- (1) Certificate No. TAA000021N Rev.1, Moxa Ethernet Switches (Rev.1 issued 2021-03-24)

- (2) Certificate No. TAA000006N Rev.4, Moxa Ethernet Switches and Video Servers

- (3) Test Report: EMC, DEKRA: 2110232R-E3012300001 V2.0 (IACS E10 Rev.7)

Network Routers (K-IMS)

—Cisco 892FSP

- (1) Certificate No. A-14276, Cisco 892FSP

- (2) Certificate No. TAA00002R1, Cisco 892FSP

- (3) Test Report (Selected Tests only): MS Testing, TL21143 Issue 2, Cisco 890 Series Network Switch

—Cisco 891-24X

- (1) Certificate No. TAA00002ME, Cisco 891-24X

- To be continued -



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## 4. Test Report etc.:

### Power Supply

- Phoenix Contact QUINT-PS (including QUINT-PS/1AC/24DC/10)
  - (1) NK Approval No.08A039
  - (2) Test Report: Phoenix Testlab E200673E1 (IACS E10:2018-10)
- Phoenix Contact TRIO-PS-2G (including TRIO-PS-2G/1AC/24DC/5/B+D)
  - (1) Certificate No. TAA00000BM Rev.5, TRIO-PS-2G Series
- Phoenix Contact QUINT-PS (DC/DC incl. Quint-PS 24DC/24DC/10)
  - (1) NK Approval No.12A013
  - (2) Test Report: Phoenix Testlab E200673E1 (IACS E10:2018-10)

### HARDWARE LIST

- K-Pos, TA HW list for 1001-O (448540E)

### FMEA

- K-Pos Basis FMEA, Based on ERZA H-170 (308977A)

### OTHERS

- (1) K-Pos Type Approval, Functional Test Report, Doc. No. 1012070b (23 Jan. 07)

- To be continued -

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**Test items & approval conditions:**

1. Test items:

(Applied testing items are marked with X.)

ENVIRONMENTAL TESTS (IACS UR E10 Rev.7 basis)		Mark
External examination		X
Operation test and performance test		X
Electric power supply failure test		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test (Acceleration ±0.7g × 1.5 hours)		X
Inclination test (Note 1)		X
Cold test (Note 2) (Temperature -15°C x 10 hours)		X
Salt mist test (Note 3)		X
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

Note 1 : For MC 330 (ThinkStation P330 Tiny), MC 340 (ThinkStation P340 Tiny)

Note 2 : Cold test for “cWing” and “cWing Mk3” was carried out at -25°C x 16 hours.

Note 3 : Salt mist test was carried out for “cWing” and “cWing Mk3”.

2. Approval condition :

The products except cWing and “cWing Mk3” are not allowed to be installed on open decks.

- The End -