



TYPE APPROVAL CERTIFICATE
No. ELE071324XP

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Monitoring and control system
<i>Type</i>	K-Chief 600
<i>Applicant</i>	KONGSBERG MARITIME AS-NORWAY P.O BOX 1009,N-3194 HORTEN HORTEN NORWAY
<i>Manufacturer</i>	KONGSBERG MARITIME AS-NORWAY
<i>Place of manufacture</i>	P.O Box 1024,N-3194 Horten Horten Norway (1)
<i>Reference standards</i>	Rules for the classification of ships.- Part C - Machinery, systems and fire protection. - Ch.3, Sect. 6, Table 1.

Issued in **Gdańsk** on **May 8, 2024**. *This Certificate is valid until* **May 7, 2029**

RINA Services S.p.A.
Adam Mejer

This certificate consists of this page and 1 enclosure



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K-Chief 600**K-Chief 600 system performs the following functions:**

- Alarm and Monitoring
- Control System for aux. machineries/Propulsion/Cargo
- Power Management System
- Aux. Generators protection

Technical Data:

The K-Chief 600 system comprises the following modules:

	Components	Part No.
Operator Control Panels	COP 05 Control Room Panel - CRP	330952
	COP05 ALC Stand Alone	391890
	COP 05 Alarm and Command Panel - ALC	344687
	COP 05 Mk3 Input Panel - INP	110-0049940
Panels	Tracker Ball Panel - TBP	388930
	PBT Flat Version Black	8100318
	Touch Pad Panel - TPP	388010
Controller unit	Segment Controller unit - SCU	329785
Distributed Processing Units (DPU)	Remote Analog input Module - RAi-16xe	329714
	Remote Digital output Module - RDo-16xe	329699
	Remote Analog TC input Module - RAi-10tc	8100161
	Remote Digital input Module - RDi-32xe	333523
	Remote Digital input Module - RDi-32Axe	333824
	Remote Analog output Module - RAo-8xe	333505
	Remote Digital I/O Module - RIO-C2xe	333346
	Process Segment Starcoupler - PSS	8100184
	Generator Protection Module - C3-Gpxe	334893
	Generator Monitoring and Control - C4xe	334894
	Sensor Interface Unit - SIUxe	350928
	Power Switch over unit - PSO-P	8100334
	IXXAT CAN Adapter	CAN-Ethernet Gateway (DCEG) - CANbridge IXXAT (CEG)
LAN to 2 CAN gateway	L2C	404654, 406381
Network component	RTL8153B-USB3.0/3.1/3.2 to 4x Gb Ethernet	446030
Extension Alarm and Watch Call Units	WCC 600	373860
Software Version	12.16	



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Documentation:

Delata Electronic Testing - Test Programme - Distributed Process Unit K250808-1 -1dated 1998-09-02
Delata Electronic Testing - Test Programme - Alarm Extension System Op. Control K250600 -1dated 1998-01-07
381827B WCC 600 Datasheet.
482250A KM module Declaration of Identit / (DoI) with statements for ENV test report.
392044A COP05 ALC SA Assembly drawing.
463242B USB 3.2 to 4x Ethernet 1Gb EX-1330M, Data Sheet
386083G SW Revision History for C600
389143B 7" Marine Touch Panel PC Hardware Module Description.
389994B Touch Pad Panel datasheet
389995C Tracker Ball Panel datasheet
390759A Touchpad Panel product description
390760A Tracker ball Panel product description.
300984E COP-05 Input Panel Hardware Module Description
HW List K-Chief 600
339779E1 SCU Module Outline Drawing
330199B PBT Datasheet
389994C Touch Pad Panel datasheet
301028B COP-05 BU-AUT Panel Hardware Module Description
392044A COP05 ALC SA Assembly drawing
300977B COP-05 ALC Panel Hardware Module Description
341333C RAI-16xe Datasheet
341336C RDo-16xe Datasheet
330186A RAI-10tc Datasheet
341335C RDi-32xe Datasheet
341334B RAo-8xe Datasheet
341338B C2xe DPU Datasheet
330194A PSS Process Segment Star Coupler (8 CAN) Datasheet
341339A C3-GP xe DPU datasheet
341340B C4xe DPU datasheet
350497A SIUxe Datasheet
340332A PSO-P datasheet
345408A CANBus to Ethernet Gateway Hardware Module Description
404663A L2C Outline Drawing

Test Reports:

DANAK-1910054 - Type approval vibration testing of COP-05 Lever Panel and COP-05 Utility Panel KM-DOC.no:318973 rev.A - dated 6 February 2008
DANAK-1910025 - Supplementary Type approval of Input Panel - dated 22 January 2008
DANAK-197941 - Type approval testing of Power Switch Over unit - dated 19 May 2005
DANAK-198195 Rev.1 - Type approval testing of KM Common Operator Panels - dated 15 June 2007
DANAK-198233 Rev.A - Type approval testing of C4 Auto unit - dated 14 August 2007
DANAK-198234 Rev.A - Type approval testing of Power Switch Over unit PSO-p/PSO-s new - dated 14 August 2007
DANAK-198468 Rev.1 - Type approval testing of CEG, Can-Ethernet Gateway - dated 15 June 2007
DANAK-1910002 Project A505037-1 Type approval testing for Pick-up - dated 12 December 2007
DANAK 1916085 Test for Marine Type Approval of L2C- Dated 15 February 2016



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Test Reports :

DANAK-1912904 Test for Marine Type Approval of WCC 600 - Dated 15 March 2013
DANAK 1914440 Test for Marine Type Approval of E38-96A29D-E002 trackball - Dated 05 December 2014
DANAK 1910922 Test for Marine Type Approval of SCU - Dated 11 June 2010
DANAK 1910740 Test for Marine Type Approval of new Xe modules - Dated 18 December 2009
DANAK 194157 Test for Marine Type Approval of DPUs - Dated 03 November 1998
DANAK 197536 Test for Marine Type Approval of DPUs - Dated 06 July 2004
DANAK 194874 Test for Marine Type Approval of DPUs - Dated 21 December 1999
DANAK 197538 Test for Marine Type Approval of PSS, dPSC, C1 and C2 - Dated 06 July 2004
DANAK 1911846 Test for Marine Type Approval of C3xe and C4xe - Dated 05 March 2012
DANAK 1911307 Test for Marine Type Approval of C3xe, C4xe and RAI-10tcxe - Dated 14 March 2011
DANAK 1911279 Test for Marine Type Approval of RTixe, SIU, NQB101 - Dated 14 February 2011
DANAK 198234 Test for Marine Type Approval of PSO-P & PSO-S - Dated 14 August 2007
Nemko - E19179.01 Test report Computer Adapters - dated 25 March 2020
Nemko E21088.03 Upgrade all HW to IACS E10 Rev.8:2021 - Dated 2021-10-28.
Nemko- REP019643 Test report Panel Input Mk3 COP 05 - dated 17 January 2024
Nemko E14127.00 Type approval test of WCC600 - Dated 2014-05-21.
SP 3P08182 Type approval test of PCP Pointer Carrier Panel - Dated 02 February 2015

Additional Test Reports for K-Chief 600:

DELTA Test Report DANAK - 1910740 Deltar A506538 - Type approval testing of modules RAI-16xe, RAO-8xe, RDI-32xe, RDI-32Axe, RDO-16xe and C2xe
DNV Report No. 2006-3473 Rev.01, Type approval testing Marine Multi Display type JH08T01 KMS-C2
Kongsberg FT/FAT Procedure K-Chief 600, issue no.A, dated 02.03.2010
Svenska Provningsanstalten 3P08182 rev.1_Kongsberg Maritime AS.pdf
372931- Nemko report no. E12103.01.pdf
Technical report 20018_rev 1 KM Panel PC.PDF

Test Carried OUT:

Minute of Meeting - Function test K-Chief 600 March 9th 2010

Alternative manufacturers:

Kongsberg Maritime Korea Ltd, 1058-7, Dalsan-ri, Jungkwan-myeon, Gijang-gun, 619-961, Busan, Korea
Kongsberg Maritime China Ltd - Kongsberg Maritime China Waigaoqiao Ltd., 136 North Fute Road , China (Shanghai), Pilot Free Trad Zone, 200131 Shanghai, China
Kongsberg Maritime China Jiangsu Ltd, 1-2F No 711 Changjiang Road, Runzhoud district, Jiangsu Province, P.C. 212002 Zhenjiang, China

Retentions:

The validity of the Type Approval is maintained if any implementations / modifications are reported, including changing in Hardware and Software; moreover tests are to be provided in order to:

- Make sure that such modifications do not affect the functionality of the system,
- Verify that no major modifications are introduced in the system structure (HW/SW)

Traceability of Hardware and Software version/release is to be ensured for each installation/application

This certificate annuls and replaces the previous one n° ELE133723XG.

Gdańsk May 8, 2024

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