



Marine & Offshore

Certificate number: 77337/A0 BV

File number: MPA2401084

Product code: 4440I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

Kongsberg Maritime AS

Horten - NORWAY

for the type of product

ALARM, MONITORING AND CONTROL SYSTEMS

K-Chief 600

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Offshore Units and Yachts.

EC Code : 31B

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 19 Jul 2029

For Bureau Veritas Marine & Offshore,

At BV OSLO, on 19 Jul 2024,

Rune MARSTEIN

This certificate was created electronically and is valid without signature



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 4 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

K-Chief600 is an integrated system which can carry out the following functions:

- Alarm and Monitoring
- Auxiliary Machinery Control
- Power Management
- Engine/Generator Protection

	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 CAN module	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

2. DOCUMENTS AND DRAWINGS :

- COP-05 Input Panel, Hardware Module Description No. 300984 rev.E dated December 2023
- USB 3.2 Gen1 Datasheet No. 463242B DS
- Software Revision History No. 386083 rev.G
- Software LCM plan and Cyber Security Management, No. 426428 rev.E
- Drawing of C3-GPxe module, No. 336084 rev.A2 dated 2012-11-12
- Drawing of C4xe module, No. 336085 rev.A2 dated 2012-11-07
- Datasheet of Generator Protection(C3GPxe), No. 341339-A
- Datasheet of Generator Monitoring and Control (C4xe), No. 341340-B
- Drawing No. 345242 rev.A1 dated 08-08-2020
- Drawing No. 333602 version B2 dated 2011-12-13
- Datasheet IXXAT CAN@net II No. 342284/A
- Drawing No. 404663A rev. A dated 2015-12-12
- Datasheet Pushbutton Telegraph No. 330199 B
- Drawing No. HA462855 revA1 dated 2008-06-24
- PSO-P Datasheet No.340332-A
- Drawing PSO-P module , No. HA464061 rev.B dated 21.10.2005
- Drawing No. HA452543 version A4 dated 07.12.2009

- PSS Datasheet No. 330194-A
- RAi-10tc Module, Drawing No. HA451005 version B3 dated 09.12.2009
- RAi-10tc Datasheet No. 330186-A
- Drawing No. 336081 rev.A dated 16.11.2009
- Datasheet No. 341333-C
- RAo- 8xe Datasheet No. 341334-B
- Drawing No. 336083 rev.A1 dated 2012-11-06
- Drawing No. 336145 version A1 dated 2012-11-02
- Remote Digital Input Datasheet No. 341335-C
- Drawing No. 336082 version A1 dated 2012-11-02
- Remote Digital Output Datasheet No. 341336-C
- Drawing No. 336078 ver A1 dated 18.06.2010
- Remote Input/ Output Datasheet No. 341338-B
- Drawing No. 336079 version A2 dated 2012-12-12
- Drawing No. 339779 rev.E dated 2014-03-25
- Segment Controller Unit(SCU) Datasheet No. 349386/B
- Sensor Interface Unit Datasheet No. 350497-A
- Drawing No. 352276, version B1 dated 2012-11-05
- TBP Tracker Ball Panel Datasheet No. 389995 rev.C
- TPP Touch Pad Panel Datasheet No. 389994 rev. B
- WCC 600 Datasheet No. 381827E
- WCC 600 Drawing No. 386576 rev.B dated 2013-10-14

3. TEST REPORTS :

- Test Report No. E19179.01 dated 2020-03-25
- Test Report No. REP019643 dated 2024-01-17
- Test Report No. E21088.03 dated 2021-10-28
- Test Report No. DANAK-1911307 rev.A dated 14 March 2011
- Test Report No. DANAK-19/11846 rev.1 dated 05 March 2012
- Test Report No. 198195 rev.1 dated 15 June 2007
- Test Report No. 69187 dated 31 Aug 2006
- Test Report No. DANAK-1910475 dated 16 June 2009
- Test Report No. 198468 rev.1 dated 15 June 2007
- Test Report No. 19/16085 rev.A dated 15 February 2016
- Test Report No. DANAK - 197329 dated 30 Jan 2004
- Test Report No. 197561 dated 09 Aug 2004
- Test Report No. 198234 rev.A 14 August 2007
- Test Report No. 197538 dated 06 July 2004
- Test Report No. K251192-2 dated 1999-12-21
- Test Report No. K250808-2 dated 1998-11-03
- Test Report No. 197536 dated 06 July 2004
- Test Report No. 1910740 dated 18 Dec 2009
- Test Report No. DANAK- 1910922 dated 11 June 2010
- Test Report No. DANAK 1911279 dated 14 Feb 2011
- Test Report No. 19/14440 rev.B dated 04 Feb 2015
- Test Report No. 3P08182 rev.2 dated 2015-02-02\
- Test Report No. E12103.01 dated 2012-10-22
- Test Report No. E18040 dated 2019-07-04
- Test Report No. E14127 dated 2014-05-21
- Test Report No. DANAK-19/12904 rev.1 dated 05 Sept 2013

4. APPLICATION / LIMITATION :

- 4.1 - BUREAU VERITAS Rules for the Classification of Steel Ships, Offshore Units and Yachts.
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31B**
- 4.4 - The equipment fulfils the EMC requirements for installation in Bridge and Deck Zone
- 4.5 - Only Hardware and Firmware / Software successfully tested together in compliance with the rules as referred to in cover page, according to the declaration of the manufacturer are covered by this certificate.
- 4.6 - Any modification of the hardware, firmware or software having an impact on the product performance or functionality has to be validated with type testing.
- 4.7 - In accordance with IACS UR E22 and as applicable to programmable devices for computer based systems of Category II or III, for each ship application:

- Ship specific documentation is to be submitted including software documentation and categorization of the computer based system.
- Inspection and testing before installation onboard is to be performed under the surveillance of the Society.
- 4.8 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 8.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The above types of product are to be supplied by **Kongsberg Maritie AS** in compliance with the type and the requirements described in this certificate.
- 5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.
- 5.3 - BV product certificate is required.
- 5.4 - For information, **Kongsberg Maritime AS** has declared to Bureau Veritas the following production site(s):

Kongsberg Maritime Ship Systems AS Bekkajordet 8a P.O.Box 1009 N-3194 Horten NORWAY	Kongsberg Maritime Korea (KMK) 9-7, Sandan 3-ro, Jeonggwan-eup, Gijang-gun BUSAN KOREA(REPUBLIC OF)	Kongsberg Maritime China Ltd. 136 North Fute Road, China(Shanghai) Pilot Free Trade Zone Shanghai CHINA
Kongsberg Maritime China Jiangsu Ltd. No. 711 Changjiang Road, Zhenjiang, Jiangsu Province 212002 Zhenjiang CHINA	Kongsberg Maritime AS POB 483 Kirkegårdsveien 45 3601 Kongsberg NORWAY	

6. MARKING OF PRODUCT :

- Maker's name or trade mark.
- Serial number of the units.
- Equipment type number or model identification under which it was type-tested
- Ⓢ or Ⓜ conformity marking, as relevant

7. OTHERS :

It is **Kongsberg Maritime AS's** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***