



LLOYD'S REGISTER TYPE APPROVAL – DESIGN APPRAISAL DOCUMENT

Issued by: HAMBURG TECHNICAL SUPPORT OFFICE

Issued to: Kongsberg Maritime AS

For: Dynamic Positioning Control System (K-Pos DP),
Position Mooring Control System (K-Pos PM),
Combination of Dynamic Positioning and Position Mooring (K-Pos DPM),
Independent Joystick Control System (cJoy)

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register Type Approval System Procedure TA14 Version 04 (September 2020) and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

1012070	B	K-Pos Type Approval Functional Test Report	23.01.2007
110-0000133	A	LR LR2002804TA-03	31.08.2021
110-0000794	Rev C	Digital Printer, Data Sheet	undated
110-0010936	-	K-Pos DP3 Product data sheet	undated
110-0011084	Rev A	Printer A4 Lexmark CS521dn Datasheet	undated
110-0018781	Rev C	cJoy OT Mk4 Datasheet	undated
110-0022770	Rev A	RCU601 Remote Controller Unit Datasheet	undated
110-0028959	Rev A1	Printer A4 Lexmark CS431dw, Datasheet	undated
110-0041418	Rev A	LR Type Approval for Lenovo Thinkstation P360 Tiny	13.02.2023
110-0043970	Rev A	Datasheet for Veinland VL66298 1-to-1 USB Extender	undated
110-0048488	C	MC360 System Config Manual	01/2024
110-0053246	Rev A	Hatteland maritime display units and accessories	28.06.2023
110-0059786	B	Release Notes DP Basis 8.5.0	27.06.2024
110-0061510	Rev A	RCU601, DNV Type Approval Certificate	13.12.2023
110-0061805	Rev A	Router Moxa EDR-8010 Series, Data Sheet	undated
110-0061807	Rev A	Router Moxa EDR-8010 Serie	28.09.2023
110-0062855	C	K-Pos Asset Inventory	02.05.2024
110-0062856	D	K-Pos System Topology	07.05.2024
110-0062857	C	K-Pos Security Capabilities	06.05.2024
110-0062858	E	K-Pos Test Procedure	03.05.2024
110-0063489	Rev A	MED Type Approval	09.01.2024
110-0066721	B	K-Pos DP OPM	05/2024
110-0066722	B	K-Pos Follow Target Mode Operator Manual Release 8.5	06/2024
110-0066726	A	Autopilot OPM	05/2024
110-0066727	A	AutoTrack OPM	05/2024
110-0066728	A	K-PosTrackLine OPM	05/2024
110-0066729	A	K-PosSeismicTrack OPM	05/2024
110-0066730	B	K-Pos Offshore Loading Application Operator Manual Release 8.5	06/2024
110-0066731	A	Drilling Application OPM	05/2024
110-0066732	A	PipelayingApplication OPM	05/2024
110-0066737	A	Dredging OPM	05/2024
110-0066738	A	DP Analyses OPM	05/2024
110-0066739	A	BackupSystem OPM	05/2024



110-0066740	A	AlternativeSystem OPM	05/2024
110-0066742	A	PowerApplications OPM	05/2024
110-0066743	B	K-Pos PM Position Mooring System Operator Manual Release 8.5	06/2024
110-0066744	B	K-Pos DPM OPM	05/2024
110-0066788	A	Built-inSimulator OPM	05/2024
110-0066794	A	Stand-aloneSimulator OPM	05/2024
110-0066841	A	AdvancedTrainer OPM	05/2024
110-0066843	A	ChartServer OPM	05/2024
110-0066844	A	DP Recorder OPM	05/2024
110-0066862	A	HeavyLiftApplication OPM	05/2024
110-0066863	A	cJoy IJS OPM	05/2024
110-0066864	A	cJoy DP-OT OPM	05/2024
110-0068347A	-	PARAGON Hard Disk Manager	undated
110-0068781	A	Type Approval Certificate	03.08.2021
110-0071432	A	cWing OPM	05/2024
110-0072298	A	DP StatusApplication OPM	05/2024
110-0079367	A	Test Report LR IACS SL1 K-Pos	31.05.2024
178001	Rev F	Moxa Switch EDS-308 Series	undated
300966	F	K-Pos Seriallines Interface Spec	04/2022
300967	H	K-Pos Interface Manual	04/2022
300977	Rev B	COP-05 ALC Panel Hardware Module Description	10/2006
300983	Rev B	COP-05 BU-DP Panel Hardware Module Description	01/2007
300984	Rev E	COP-05 Input Panel Hardware Module Description	12/2023
300985	Rev B	COP-05 Heading Wheel Panel Hardware Module Description	01/2007
307003	Rev B	Kwant Controls KC 06-K Joysticks Hardware Module Description	07/2011
312740	Rev C	RHUB200-5 Data Sheet	undated
312741	Rev C	RSER200-4 Data Sheet	undated
318636	Rev E	Moxa NPort 5200 Series, Data Sheet	02/2022
338386	Rev A	COP-05 Standalone Trackball Hardware Module Description	09/2009
351488	Rev A	RMP200-8 Data Sheet – 2	11/2010
351489	Rev A	RMP201-8 Data Sheet	11/2010
352676	Rev E	Moxa Switch EDS-316 Series, 16-Port Unmanaged Ethernet Switch	10.01.2023
355997	Rev G	Switch Moxa EDS-Series, DNV Type Approval Certificate	24.11.2022
391923	Rev C	Type Approval Certificate MIS-Modular Interface Systems	19.10.2023
409453	Rev C	L2C Technical datasheet – 2	undated
415730	Rev D	Serial to Ethernet Device Server Series	08.04.2022
417159	Rev C	Cisco C890 Series Routers Hardware Module Description – 2	undated
418371	Rev C	RCU602 Datasheet	undated
426136	Rev C	Display 55- UHD ECDIS, Glass, w-wo touch, MK1	14.09.2022
429106	Rev E	Display MD19-24-27-32 ECDIS with Glass front, with-without Touch	24.06.2024
446712	Rev B	Joystick, Kwant KC 06-K,	04.10.2022
448540	Rev J	HW list for K-Pos – 4	14.03.2024
449192	Rev A	PSU TRIO-PS-2G-1AC-24DC-5-B+D Datasheet	20.02.2018
452545	Rev B1	Power Phoenix Contact Trio-PS	15.06.2021
454265	B	Type Approval Certificate Moxa	03.08.2021



458313	B	K-Pos DP1 Product data sheet	undated
463254	Rev C	Hatteland PanelPC TA MR (Series E MMC - Standard and Compact)	26.11.2024
463340	Rev A1	Router Cisco 891-24X, DNV Type Approval Certificate	23.04.2020
463482	Rev A	Adapter USB to 1 serial RS232 DS	15.03.2016
463483	Rev A	Adapter USB to 1 serial RS422 DS	27.06.2014
469729	01	NEMKO E18040-01 431211 01	27.10.2021
470055	A	Type Approval Certificate	08.02.2023
470382	Rev B	Power Phoenix Contact Quint-PS, LR Type Approval Certificate	05.05.2023
472200	Rev B	Moxa Switch EDS-408A Series, 8-Port Managed Ethernet Switch	12.05.2022
472294	A	K-Pos DP2 Product data sheet	undated
481031	A	MC340 System Config Manual	20.05.2021
483085	Rev A1	Computer MC340 (P340 Tiny), LR Type Approval Certificate	29.04.2021
486670	Rev A	cWing Mk3 Datasheet	undated
488469	Rev C	Weidmuller PRO TOP1, TOP3 & TOP DC Series	05.07.2021
489196	Rev C	Switch Cisco C1000, Datasheet	02/2021
489199	Rev B1	Type Approval Certificate	21.09.2022
489200	A	450495 TRF MAR	04.03.2022
492309	Rev A	Router Cisco C1100 Series, Data Sheet	11/2021
5357306	Rev A	K-Pos HW List – 3	12.04.2024
5367621	Rev A	Class Approval Manual index	25.04.2024
5367976	Rev A	Id (4214543) FAT K-Pos 850 IJS	25.04.2024
5367983	Rev A	Id (4214638) FAT K-Pos 850 DP2	25.04.2024
KM-GUI-0118	-	Guideline for Secure Development Lifecycle SDLC en	21.03.2024
KM-GUI-6015	-	Patch Management en	18.11.2023
KM-PRO-0120	-	Configuration Management Procedure en	13.02.2024
KM-PRO-2025	-	KM Alerts and Notifications	17.02.2022
KM-PROC-0080	-	Change management en	03.01.2024

TEST REPORTS

110-0024697	A	Test report Nemko Color laser printer	06.01.2023
110-0039194	B	Test report Nemko cJoy Operator Terminal Mk4	12.03.2024
110-0040379	-	NEMKO REP008558-PRJ0014681 Test Report RCU601	16.03.2023
110-0043600	A	Test report Aucoteam USB Extender via CAT	20.10.2022
110-0043603	A	Test report Ametek TS23.2	29.09.2022
110-0053579	A	Test report Nemko CS431dw	24.08.2023
110-0062481	A	Test report Dekra Moxa Router	02.05.2023
110-0066090	A	Test report Dekra Ethernet switch	18.01.2021
110-0068872	A	Test report Dekra Ethernet switch	18.01.2021
110-0068874	A	Test report Dekra Marine network switch	18.01.2021
110-0068875	A	Test report Dekra Marine network switch	18.01.2021
110-0068877	A	Test report Dekra Industrial Ethernet switch	16.07.2018
110-63651	A	Test report NEMKO REP019643-PRJ0044275-Mk3 COP05	17.01.2024
314243	Rev A	Type approval testing of New RIO HW Line modules	17.10.2006
338108	-	Test report Delta Trackerball	15.09.2009
355954	-	Test report Delta KM Common Operator Panels	15.06.2007

356291	-	Test report Delta cWing	15.09.2009
383971	Rev B	Test for Marine Type approval of RCU602 & RMC-ST	28.04.2017
401595	-	Test report The national Institute of technology	23.03.2015
412374	Rev A	ENV Test Report for Marine Approval of L2C – 2	15.02.2016
412562	Rev 01	ENV Report f- cJoy and cWing E	15.02.2016
416665	Rev A	Test Report for Moxa NPort 5232-T	05.07.2016
464983	Rev C	Serial Adapters RS232-422 TR	28.07.2020
482733	Rev 03	ENV Test Report RHUB200-5 – 2	24.06.2021
487708	Rev 03	ENV Report for KM Modules up to IACS E10 rev. 8	28.10.2021
491274	B	NEMKO REP019643-PRJ0044275-Mk3 COP05	17.01.2024
492312	B	452853 TRF MAR	01.06.2022
494556	Rev A	Moxa EDS-316 EMC Test Report (IACS E10 Rev 7)	18.01.2021
494564	Rev A	Moxa NPort-52xx EMC Test Report (IACS E10 Rev 7)	11.01.2022

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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations. Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the Lloyd's Register Type Approval System Procedure.