



TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB000039E
Revision No:
2

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

That the Voyage data recorder (VDR)

with type designation(s)
VR-7000

Issued to

Furuno Electric Co., Ltd.
Nishinomiya, Japan

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

Regulation **MSN 1874 Amendment 8,**

item No. UK/4.29. SOLAS 74 as amended, Regulations V/18, V/20 & X/3, IMO Res. A.694(17), IMO Res. MSC.36(63), IMO Res. MSC.97(73), IMO Res. MSC.191(79), IMO Res. MSC.302(87), IMO Res. MSC.333(90)

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

This Certificate is valid until **2025-07-01**.

Issued at **London** on **2024-05-08**

DNV local unit:
Japan CMC



for **DNV UK Ltd.**

Approval Engineer:
Steinar Kristensen

Approved Body No.: **0097**

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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.



Form code: MER 201.GBR

Revision: 2023-03

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Product description

The VR-7000 VDR comprises combinations of the following components:

Unit	Model Name	Remark	Location
Data collecting unit (DCU)	VR-7010		Protected
Fixed data recording unit	VR-7020 or		Exposed
	VR-7023		Exposed
Float-free data recording unit	VR-7021F/ Tron 40VDR or	1), 2)	Exposed
	VR-7024F/ Tron 40VDR AIS (HB)	2), 3)	Exposed
Remote alarm panel	VR-7017		Protected
Microphone	VR-7011	Max 8 ch.	Protected
Microphone waterproof	VR-7012W		Exposed
Video LAN converter	IF-7100	Max 2 ch. (DVI-D/RGB)	Protected
Sensor adapter	MC-3000S	Serial	Protected
Sensor adapter	MC-3010A	Analog (option)	Protected
Sensor adapter	MC-3020D	Digital (option)	Protected
Live player V5	VR-7030	Playback package	Protected
Intelligent HUB	HUB-3000	option	Protected
Switching HUB	HUB-100	option	Protected
Junction box	VR-7022F		Exposed
Junction box	IF-8530	option	Protected
<i>Software</i>		<i>Prog.no. 2450102 Rev.01.xx</i>	

- 1) In accordance with IEC 61996-1 (2013) and IEC 61996-2 (2007), date for last placing on board is 2025-07-01
- 2) Separate certificate is required for EPIRB where the Float free is to be used to comply with carriage requirements for EPIRB.
- 3) Optionally installed with heated bracket (HB).

Application/Limitation

- The VR-7000 equipment shall be installed in compliance with the installation instructions of Pub. No. IME-44850-X. Fixed Data Recording Unit capacity is 32GB.
- The VR-7000 is in compliance with IMO Res. MSC.333(90), as amended by Res. MSC.494(104), when installed with Float Free VR-7024F/ Tron 40VDR AIS (HB)
- Float free VR-7024F (with optional heated bracket) is tested for compliance with IEC 61996-1 (2013) +A1(2021) using a Galileo GNSS receiver in accordance with IEC 61108-3 (2010).

Note: The VR-7000 is examined and found to comply with the standards for IEC 61924-2 "Modular structure for INS", Annex K and Annex M.

Tests carried out

- Performance: IEC 61996-1 (2013) + A1(2021)
- Serial Interface: IEC 61162-1 (2016)
- Serial Interface: IEC 61162-2 (1998)
- LAN Interface: IEC 61162-450 (2018)
- Presentation: IEC 62288 (2014)
- Environmental: IEC 60945 (2002) incl. Corr.1 (2008)
- Bridge Alert Management: IEC 62923-1 (2018) and IEC 62923-2 (2018)

Type Examination documentation

DNV No.	Document ID	Rev.	Description
95	DANAK-19/14068	1	Report: Delta, Shock, penetration, fire, deep sea immersion and data verification test report for VDR Capsule MK4
92	BHS/4542/002/0062585/14	2014-04-25	Certificate: BSH, Conformity statement for PT9 NINETY Underwater Locating Device (ULD)
88	DANAK-19/13648	2	Report: Delta, Marine Type Approval test report including data recording capsule
86	LIC 12-23-084	2023-05-22	Report: Labotech, Rain and spray test report for VR-7022F Junction box
85	LIC 12-23-037	2023-04-12	Report: Labotech, Vibration test report for VR-7023 Fixed Data Recording Unit
84	LIC 12-23-036	2023-04-12	Report: Labotech, EMC test report for VR-7023 and VR-7010 Data Recording Units
83	LIC 12-22-194	2022-11-16	Report: Labotech, Compass Safe Distance test report for VR-7023 Fixed Data Recording Unit
82	LIC 12-22-193	1	Report: Labotech, Temperature test report for VR-7023 Fixed Data Recording Unit
81	LIC 12-22-192	2022-11-16	Report: Labotech, EMC test report for VR-7023 Fixed Data Recording Unit
77	OME-44852-K10	2023-03-03	Manual: Furuno, Instruction Manual CDR Maintenance Viewer, Model: VR-7000/VR7000S
76	OME-44851-K10	2023-03-03	Manual: Furuno, Operator's Manual, Live Player V5, Model: VR-7030
75	OME-44850-R11	2023-03-03	Manual: Operator's Manual, VDR/S-VDR Model: VR-7000/VR-7000S
73	IME-44850-X11	2023-03-03	Manual: Furuno: Installation Manual VDR/S-VDR, Model: VR-7000/VR-7000S_
70	Cert. 1354	4. Feb. 2022	TAC-1354 for Jotron models Tron 40VDR AIS_04-FEB-2022
69	Cert. 354	4. Feb. 2022	TAC-354 for Jotron models Tron 40VDR AIS_04-FEB-2022
66	75950873-02	Issue 01	Report: TUV IEC 60945, ETSI EN 301 489-1 and ETSI EN 301 489-19 Tron 40VDR AIS
65	75950873-08	Issue 03	Report: TUV, IEC 61108-3 (2010) GNSS testing of Tron 40VDR AIS
64	75950873-09	Issue 01	Report: TUV: IEC 61097-2 Annex D, 121.5 MHz Homing transiter, Tron 40VDR AIS
63	BSH/454.GNSS/TUVSU DLtd/6	8. Feb. 2022	Report: BSH, IEC 61108-3 (2010) (4.3.8, 5.6.9) integrated GNSS receiver,
62	75950873-01	Issue 02	Report: TUV, Cospas-Sarsat T.007 Model: Tron 40VDR AIS
59	75950873-07	Issue 03	Report: TUV, IEC 612097-2 Model: Tron 40VDR AIS EPIRB
58	E21187.00	2022-02-10	Report: NEMKO IEC 61996-1:2013 + AMD1:2021 – Partial test, Tron 40VDR AIS (COSPAS-SARSAT 406 MHz Satellite Emergency Position-Indicating RadioBeacon (EPIRB) with attached Voyager Data Recorder (VDR))
56	K-24-17-1036-0	13. APR 2021	Report: Furuno IEC61162-450: VDR Internal Test Report of IEC61162-450
53	K-24-17-1026-0	14. JAN 2021	Report: DNVGL type approval Internal test Report of IEC 62923-1/2 Model VR-7000/VR-7000S - DELETE
48	FLI 12-14-021		VR-7000: Test Report IEC61162-450
47	LIC 12-19-026		VR-7010: IEC61162-1
46	K24-17-941-0		Internal test report of IEC61162-450 Ed.1 Amd.1-
45	FLI 12-14-020		Test report IEC61162-1/-2 for VR-7000
44	K-24-17-927-0		Internal test report IEC61162-1 Ed.5
43	K24-19-021		Technical document; IF-7100 changes
42	K24-17-637-2	1	Test report of Image Evaluation for VDR
40	FLI12-14-137		IEC60945: Compass safe distance
39	FLI12-14-136		IEC60945: Environmental test report
38	FLI12-14-135		IEC60945: EMC test report
37	K24-19-018		Technical document - monitoring and alerts
36	E42-01402-G11	2023-03	Manual, Furuno: Instruction Manual, Data Extraction Procedure, Model VR-7000/VR-7000S
35	K24-19-019		Technical document - configuration data file

DNV No.	Document ID	Rev.	Description
34	K24-19-017-3		Technical document - BER monitoring
31	K24-17-657		UTC time synchronization
30	K24-17-658		Recording duration test
28	FLI12-14-026		IEC62288 report
27	FLI12-14-025		Compass safe distance report
26	FLI12-14-024		IEC60945 operation check report
25	FLI12-14-023		IEC60945 test report
24	FLI12-14-022		EMC test report
23	FLI12-14-021		IEC61162-450 test report
22	FLI12-14-020		IEC61162-1/2 test report
18	E13261.04		NEMKO test report - TRON40VDR - IEC61097-2, IEC60945, IEC61996-1, RTCM77
17	75924802	1	TUV SUD - TRON40VDR test report - Cospas-Sarsat T.007
12	ENV267		L3 HVR04 Environmental/EMI test report
11	ENV266		L3 HVR04 Crash Survivability test report
9	K24-17-637		Furuno Image Test Report of VR-7000
8	K24-17-633		Test report IEC61996-2 6.2.2.5 Audio complex signals
7	K24-19-016		Technical Document VR-7000
6	K24-17-591		VR-7000 - Type approval testing report
5	K24-19-017		VR-7000 - Technical document - LTC interface specification

Tests carried out

- Performance: IEC 61996-1 (2013) + A1(2021)
- Serial Interface: IEC 61162-1 (2016)
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- LAN Interface: IEC 61162-450 (2018)
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Marking of product

The type designation and name and contact address of the manufacturer shall be affixed visibly, legibly and indelibly to at least one part of the product. In addition the various equipment shall be marked with serial number. Safe distance to magnetic compass and power consumption and/or supply voltage may be stated in the individual installation manuals.