

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00001MR
Revision No:
9

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV AS under the authority of the Government of Norway.

This is to certify:

That the Simplified voyage data recorder (S-VDR)

with type designation(s)
VR-7000S

Issued to

Furuno Electric Co., Ltd.
Nishinomiya, Hyogo Pref, Japan

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

Regulation (EU) 2022/1157,

item No. MED/4.47. SOLAS 74 as amended, Regulation V/20, IMO Res. A.694(17), IMO Res. MSC.163(78), IMO Res. MSC.191(79), IMO Res. MSC.302(87)

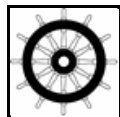
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-06-06**.

Issued at **Høvik** on **2023-06-28**

DNV local unit:
Kobe

Approval Engineer:
Steinar Kristensen



Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 2019.

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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



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.



Product description

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

Unit	Model Name	Remark	Location
Data collecting unit (DCU)	VR-7010	<i>Incl. 2+6 serial interfaces</i>	Protected
Fixed data recording unit	VR-7020 or	<i>One or the other recording unit is satisfactory</i>	Exposed
	VR-7023		Exposed
Float-free data recording unit	VR-7021F/ Tron 40VDR ^{1), 2)} or		Exposed
	VR-7024F/ Tron 40VDR AIS (HB) ^{2), 3)}		Exposed
Remote alarm panel	VR-7017		Protected
Microphone	VR-7011	<i>Max 8 ch.</i>	Protected
Microphone waterproof	VR-7012W		Exposed
Video LAN converter	IF-7100	<i>Max 2 ch.</i>	Protected
Sensor adapter	MC-3000S	<i>Serial</i>	Protected
Sensor adapter	MC-3010A	<i>Analog (option)</i>	Protected
Sensor adapter	MC-3020D	<i>Digital (option)</i>	Protected
Live player V5	VR-7030	<i>Playback package</i>	Protected
Intelligent HUB	HUB-3000	<i>option</i>	Protected
Switching HUB	HUB-100	<i>option</i>	Protected
Junction box	IF-8530	<i>option</i>	Protected
Junction box	VR-7022F	<i>option</i>	Exposed
Software versions			
VR-7010	2450102-01.xx		
VR-7017	2450103-01.xx		

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-7000S equipment shall be installed in compliance with the installation instructions of Pub. No. IME-44850-x.

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).

Type Examination documentation

DNV No.	Document ID	Rev.	Description
61	DANAK-19/14068	1	Report: Delta, Shock, penetration, fire, deep sea immersion and data verification test report for VDR Capsule MK4
58	BSH/4542/002/0062585/14	2014-04-25	Certificate: BSH, Conformity statement for PT9 NINETY Underwater Locating Device (ULD)
56	DANAK-19/13648	2	Report: Delta, Marine Type Approval test report including data recording capsule
54	LIC 12-23-084	2023-05-22	Report: Labotech, Rain and spray test report for VR-7022F Junction box
53	LIC 12-23-037	2023-04-12	Report: Labotech, Vibration test report for VR-7023 Fixed Data Recording Unit

DNV No.	Document ID	Rev.	Description
52	LIC 12-23-036	2023-04-12	Report: Labotech, EMC test report for VR-7023 and VR-7010 Data Recording Units
51	LIC 12-22-194	2022-11-16	Report: Labotech, Compass Safe Distance test report for VR-7023 Fixed Data Recording Unit
50	LIC 12-22-193	1	Report: Labotech, Temperature test report for VR-7023 Fixed Data Recording Unit
49	LIC 12-22-192	2022-11-16	Report: Labotech, EMC test report for VR-7023 Fixed Data Recording Unit
47	K24-17-1089	27th Jun, 2022	Report: Furuno IEC 61996-2 update testing, DNV type approval, Model: VDR-7000S, Type Simplified Voyage Data Recorder
42	OME-44850-R11	2023-03-03	Manual: Operator's Manual, VDR/S-VDR Model: VR-7000/VR-7000S
41	OME-44852-K10	2023-03-03	Manual: Furuno, Instruction Manual CDR Maintenance Viewer, Model: VR-7000/VR-7000S
40	OME-44851-K10	2023-03-03	Manual: Furuno, Operator's Manual, Live Player V5, Model: VR-7030
21	K-24-17-1036-0	Ed.2	Report: Furuno IEC61162-450: VDR Internal Test Report of IEC61162-450
18	IME-44850-X11	2023-03-03	Manual: Furuno: Installation Manual VDR/S-VDR, Model: VR-7000/VR-7000S
16	K-24-17-1026-0	Ed.1_ver0	Report: VDR Model: VR-7000/VR-7000S - Internal Test Report of IEC62923-1 and -2
13	FLI 12-14-021		Test report of IEC61162-450 for VR-7000
12	K-24-17-941-0		Internal test report of IEC61162-450 Ed.1 AMD1
11	LIC 12-19-026		Test report IEC61162-1 for VR-7010
5	E42-01402-G11	2023-03	Manual, Furuno: Instruction Manual, Data Extraction Procedure, Model VR-7000/VR-7000S
4	NEMKO E13261.06		EPIRB with attached Voyage Data Recorder
1	K24-17-797	2	Type approval testing procedure S-VDR
79*	K24-17-1084	31. May 2022	Report: Furuno, DNV type approval testing report of IEC 61996-1 E.d2.1, Model VR-7000
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 transmitter, Tron 40VDR AIS
63*	BSH/454.GNSS/TUVSUDLtd/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))
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

DNV No.	Document ID	Rev.	Description
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-Z		Data Extraction Procedure
35*	K24-19-019		Technical document - configuration data file
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

* file 344.1-003845

Tests carried out

- Performance: IEC 61996-1 (2013)*
- Serial Interface: IEC 61162-1 (2016)
- Serial Interface: IEC 61162-2 (1998)
- Network 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)

*Incorporates IEC 61996-2 (2007)

Float free capsule model VR-7024F is tested in accordance with IEC 61996-1 (2013) +A1(2021) as applicable for float free capsule.

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.