

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00001MR
Revision No:
1

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 GL AS under the authority of the Government of the Kingdom 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) 2015/559,**

Annex A.1, item No. A.1/4.47 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation V/20, IMO Res. A.694(17) and IMO Res. MSC.163(78) & 191(79)

Manufacturers authorised representative

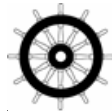
Furuno Electric Co., Ltd.
Nishinomiya Hyogo Pref, Japan

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

This Certificate is valid until **2021-10-17**.

Issued at **Høvik** on **2016-11-01**

DNV GL local station:
Kobe



for **DNV GL AS**

Approval Engineer:
Olaf Gundersrud

Notified Body
No.: **0575**

Vidar Dolonen
Head of Notified 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-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 GL 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

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Product description

The VR-7000S S-VDR consists of the following units:

Unit	Location
Data collecting unit	Protected
Alarm panel	Protected
Recording unit	Exposed
Microphone(s)	Protected/exposed

For details, see Appendix.

Application/Limitation

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

Note: The VR-7000S is examined and found to comply with the standards for interconnection with a Bridge Alarm Management System; IMO resolution MSC.302(87) "Bridge Alarm Management" and IEC 61924-2 "Modular structure for INS", Annex K and Annex M.

Type Examination documentation

- See Appendix.

Tests carried out

- IEC61996-1(2013)*
- IEC61162-1(2010)
- IEC61162-2(1998)
- IEC61162-450(2011)
- IEC62288(2014)
- IEC60945(2002)

*incorporates IEC61196-2(2007)

Marking of product

The designation of Manufacturer and Type to be fixed in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

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APPENDIX

Product description:

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

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

Type Examination documentation

NPS No.	Document No.	Rev.	Document Title
9	OME-44852-C10		Operation manual - maintenance viewer
8	OME-44851-C10		Operation manual Live Player V5
7	OME-44850-F10		Operation manual VR-7000S
6	IME-44850-K10		Installation manual VR-7000S
5	E42-01402-C10		Data Extraction Procedure
4	NEMKO E13261.06	06	Test Report TRONVDR
1	K24-17-797	1	Type approval testing report VR-7000S
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
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

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APPENDIX

Type Examination documentation cont.

NPS No.	Document No.	Rev.	Document Title
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
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

* file 344.1-003845