

Certificate No:
MED-B-9205
Item No:
A.1/4.29
Job Id:
344.1-003845-1

EC TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2012/32/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Voyage data recorder (VDR)

with type designation(s)
VR-7000

Issued to

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

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

Annex A.1, item No. A.1/4.29 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulations V/18, V/20 & X/3, IMO Res. A.694(17), IMO Res. MSC.191(79), IMO Res. MSC.333(90) and 2000 HSC Code 13

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

Høvik, 2014-10-07
for DNV GL AS



This Certificate is valid until
2019-09-30


Marianne Strand Valderhaug
Head of Department

Notified Body No.: **0575**

DNV GL local office:
Kobe


Olaf Gundersrud
Surveyor



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.

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Product description

The VR-7000 VDR consists of the following units:

Component	Location
Data collecting unit	Protected
Alarm panel	Protected
Fixed recording unit	Exposed
Float-free recording unit	Exposed
Microphone(s)	Protected/exposed

For details, see Appendix.

For latest revision of the Appendix, see <http://exchange.dnv.com/tari>

Application/Limitation

The VR-7000 equipment shall be installed in compliance with the installation instructions of Pub. No. IME-44850-Z. Fixed Data Recording Unit capacity is 32GB.

Note: The VR-7000 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)

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.

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

Module D: The quality system for production and testing shall be approved by the Notified Body.

Module E: The quality system for inspection and testing shall be approved by the Notified Body.

Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.



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USCG Approval

The product has been assigned a **U.S. Coast Guard Module B number**, USCG approvals 165.150/EC0575 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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



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APPENDIX REV. NO. 1 (PAGE 1 OF 2)

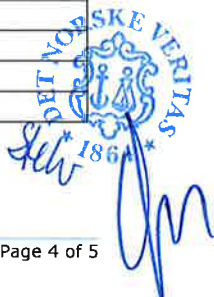
Product description:

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

Unit	Model Name	Remark
Data collecting unit (DCU)	VR-7010	
Fixed data recording unit	VR-7020	
Float-free data recording unit	VR-7021F	
Remote alarm panel	VR-7017	
Microphone	VR-7011	Max 8 ch.
Microphone waterproof	VR-7012W	
Video LAN converter	IF-7100	Max 2 ch.
Sensor adapter	MC-3000S	Serial
Sensor adapter	MC-3010A	Analog (option)
Sensor adapter	MC-3020D	Digital (option)
Live player V5	VR-7030	Playback package
Intelligent HUB	HUB-3000	option
Switching HUB	HUB-100	option
Junction box	VR-7022F	
Junction box	IF-8530	option

Type Examination documentation

DNV No.	Document No.	Document Title
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	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
4	OME-44852-Z	Operation manual - maintenance viewer



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3	OME-44851-Z	Operation manual Live Player V5
2	OME-44850-Z	Operation manual VR-7000
1	IME-44850-Z	Installation manual
36	E42-01402-Z	Installation manual - Data Extraction Procedure
37	K24-19-018	Technical document - monitoring and alerting

Place and date
HØVIK, 2014-09-30


Olaf Gundersrud



End of Certificate